A Qualitative Examination of the Relationship Between COVID-19 Vaccination and Skilled Nursing Facility Staffing

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September 10, 2022

BROWN
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Background

- Skilled nursing facilities (SNFs) provide post-acute and long-term care
- COVID-19 vaccination is a critical component of infection prevention in this setting
- Vaccine uptake among SNF staff varies widely and remains suboptimal

Objectives

- To understand the impact of COVID-19 vaccination, including vaccine hesitancy, mandates, and boosters, on SNF staff and staffing levels and to clarify effective approaches to improve staff COVID-19 vaccination rates

Methods

- Sample selection and recruitment
  - 8 healthcare markets that varied based on region of the country and SNF utilization patterns
  - In each market, 5 SNFs that varied in star rating, size, payer mix, and profit status
  - For each SNF, gathered administrator contact information
  - When the participant left facility between interviews, we interviewed the new administrator and followed the SNF over the course of the project

Methods

- Interview protocol design and piloting
  - Designed to understand COVID-19 policies and guidance, the impact of COVID-19 on residents, families, staff, and the administrator, infection control strategies including vaccination, and administrator expectations for the future
  - Conducted 3 cognitive interviews, revised, then conducted 3 pilot interviews and made final revisions

Methods

- Interview procedures
  - 156 total interviews
  - Completed 4 interviews per SNF over 1-year period
  - Conducted between July 2020 and December 2021
  - Conducted virtually or by phone, lasted approximately 60 minutes. At the beginning of each interview, participants gave consent to record
  - At the end of each interview, scheduled the next interview for three months in the future
  - Audio recordings were transcribed, reviewed, corrected, and de-identified
  - Participants received an e-gift card as a token of appreciation for each interview

Methods

- Analysis
  - Identified overarching themes using modified grounded theory
    - Preliminary coding scheme based on interview questions developed and adjusted iteratively
  - Four researchers independently coded transcripts, met in pairs weekly to reconcile differences, and identified themes
  - Individuals in each pair rotated
  - After 84 transcripts, confirmed high level of agreement, then divided the remaining transcripts: 54 were individually coded, 18 still coded by rotating pairs
  - Kept a comprehensive audit trail
  - Coded data entered into NVivo Version 12 Plus (QSR International)

Results

- COVID-19 vaccination initially met with varying levels of enthusiasm by SNF staff
- Administrators reported strategies to reduce staff vaccine hesitancy including incentives and bonuses, reductions in PPE requirements, and education
- Administrators discussed the role of mandates in improving staff vaccination coverage
- Administrators discussed vaccine boosters, including that staff were more hesitant to receive the booster than the initial vaccine, and vaccine promotion efforts prioritized initial vaccination

Initial vaccination, varying hesitancy/willingness

- I've found that many residents are willing to take it. I'm finding very many staff are hesitant to take it. As of right now, we're at about 38%, and I felt like we had to really kick and scream to get our staff up to that level. (S2N3.2, January 2021, Northeast, 100-125 beds, For profit, Star rating 5)

- We were close to 60% of our staff that took it the first time around. I think that number will go up. We heard from several people that didn't want to take it the first time because they wanted to see people take it and make sure they were okay. (S4N4.2, January 2021, Midwest, 151+ beds, Not for profit, Star rating 3)

Initial vaccination, reasons for hesitancy

- I have some staff that are younger and feel that the vaccine might interfere with maybe them having children later in life. Some people just don't believe in the vaccine, they said it was made too quickly, they don't know what the side effects are going to be. (S1N1rep.1, April 2021, Northeast, 126-150 beds, For profit, Star rating 1)

- They don't trust it. People have gotten sick from it…It's that whole thing, "Well it gave them COVID." No, it didn't give them COVID, just like the flu vaccine doesn't give you the flu. Unfortunately we have a very uneducated workforce. (S3N2.3, April 2021, South, 100-125 beds, Not for profit, Star rating 5)

Initial vaccination, reasons for hesitancy

- Most of our staff is African American, and African Americans and the United States government don't have a good history in regards to vaccines…I'm African American myself. We've been taught a lot of things in regards to vaccinations just like the syphilis disease, things back in the day. They know about those things…What is it? Are we getting a vaccine? Are we a testing? Are we guinea pigs? (S3N1.4, May 2021, South, 151+ beds, For profit, Star rating 1)

- Most of the staff are still wary, just some of them are conspiracy theorists and they're like, "No, I'm not going to do it."…I have others, too that just say, "…I'm not taking this because it's too new and I don't trust it and the government's going to tell you what they want to tell you."…And then you start hearing all this stuff about the UFOs. It's like, "Okay, all right, well, we're way off topic now." (S3N5.2, May 2021, South, <100 beds, For profit, Star rating 4)

Strategies to promote vaccination

- Anybody that got vaccinated, their name will go in a hat, and we'll pull it out, and they'll win $1000 bonus, kind of prompting them, maybe “Hey, if you haven't got the vaccine, maybe you should. Would you like to talk about it?” (S1N1rep.1, April 2021, Northeast, 126-150 beds, For profit, Star rating 1)

- I figured that more staff would probably get vaccinated if their husband could, or if their wife could. I had some staff members that their grandmothers and mothers couldn't even get appointments. So I was like, "Yes, tell them to definitely come in." I wanted to help out the older population. So, that was another reason I opened it up….We probably had about 100 if not a little bit more. Because, I opened it up to two family members per employee. (S8N2.3, April 2021, West, 151+ beds, For profit, Star rating 2)

Strategies to promote vaccination

- We went around, myself and my infection control nurse, to talk to the people…We went to the people who didn't sign up for it and said, "Well, do you need more information? What is it that's holding you back?" We tried to take that and give them the information that they needed. (S2N4.2, February 2021, Northeast, 151+ beds, Not for profit, Star rating 3)

- We did postings, we did individual conversation, our nurse practitioner visited with employees. And then also, the parent organization has an acceptance and a declination document for employees and residents…The other thing that the organization gets for the employees is, if an employee gets their first and second dose of the vaccine…they'll get a $100 gift card for completing it. And then if 75% of the staff complete the vaccination, everybody who got the vaccine will get another $100 gift card. (S4N3.2, January 2021, Midwest, 100-125 beds, For profit, Star rating 1)

Strategies to promote vaccination

- In [state] we can't mandate vaccinations, so what we're thinking of doing at our building is if you're not vaccinated, you'll have to wear an N95 mask, which a lot of staff really dislikes. (S5N4.3, August 2021, West, 126-150 beds, For profit, Star rating 2)

- One of the other regulatory changes that we were just thrilled about is that if the staff have been vaccinated, we are no longer required to do the weekly COVID-19 testing. That's huge because that took a chunk of time. (S7N5.2, May 2021, South, <100 beds, Not for profit, Star rating 5)

Use of mandates to promote vaccination

- Our company took the position that they're making vaccination mandatory which is a whole new issue for us… "As of September 30th then, it's considered a voluntary resignation and we can't have you on our staff."…I'm a little scared because I can't afford to lose one person, let alone 20 because of this mandate. (S2N3.4, July 2021, Northeast, 151+ beds, For profit, Star rating 1)

- I think some surrounding states are probably heading that way where they're going to start mandating it for healthcare workers. If the whole state did it, I'd feel better about that than just our company because I'm going to go down the street to a company that wouldn't mandate it. (S5N4.3, August 2021, West, 126-150 beds, For profit, Star rating 2)

Use of mandates to promote vaccination

- Our corporation kind of put out a statement that we're not going to mandate it [the COVID-19 vaccine] at this time…We struggle as a company with staffing. So if others are mandating, we think they may come to us…Now this Biden thing happened yesterday, and there's a lot of conversation. And I think generally, I'm pleased. I think it makes the government the bad guy instead of us. (S4N5.4, August 2021, Midwest, 151+ beds, Not for profit, Star rating 4)

- We've had a couple people who we ultimately thought would resign or seek medical or religious exemption, and they have since decided to go ahead and get the first round of their vaccines, and so that surprised us. (S5N5.3, September 2021, West, <100 beds, For profit, Star rating 4)

Limited emphasis on boosters

- We did a booster clinic….And we had really good turnout again…It was entirely voluntary. We weren't mandating the booster at all, but there was still really positive turnout. I think just about everybody who was fully vaccinated with the two doses has since gotten their booster. (S5N5.4, December 2021, West, <100 beds, For profit, Star rating 4)

- Basically all the eligible residents received a booster…Some of the staff have, as well, quite a few staff, but definitely a lower percentage than with the residents…I think with the mandate, more of our energy, time, and effort has been spent on getting every single employee vaccinated rather than the booster itself. (S6N2rep.4, December 2021, South, 100-125 beds, For profit, Star rating 5)

Limited emphasis on boosters

- So very very, very very high participation in residents. Very disappointing in staff. Only 47% of the nursing home staff received the booster that are eligible. I did not require it. The other one was required…I did see more hesitancy for the booster. Absolutely….It was just to me, seems to be a more lackadaisical approach than there was excitement at first with the first one. (S7N5.4, December 2021, South, <100 beds, Not for profit, Star rating 5)

Conclusions

- SNF staff perspectives regarding vaccinations have evolved over the course of the pandemic, and state and federal vaccine mandates have influenced these perspectives and the strategies to promote vaccination

- Although many staff initially expressed hesitancy about vaccination, we found that administrators reported numerous strategies they found to be effective. Additionally, federal and state mandates were successful at increasing staff vaccination

- Given low rates of staff boosters, our findings suggest a policy opportunity to prioritize these doses

Thank you!

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Nursing Home COVID-19 Vaccine Mandates, Staff Vaccination Coverage, and Staff Shortages in the US

Brian McGarry

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  - Katherine Wen

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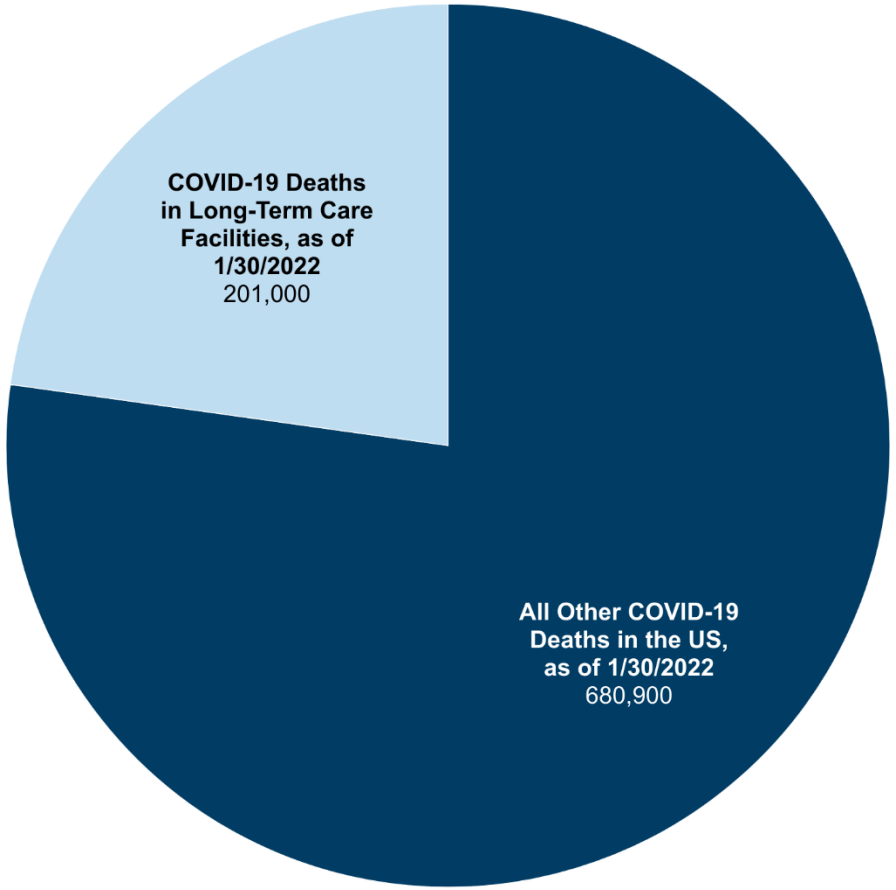
Background and Motivation

Figure 1

Long-Term Care Facility Residents and Staff Account for More Than 201,000 COVID-19 Deaths, and At Least 23% of All COVID-19 Deaths in the U.S., As of 1/30/2022.



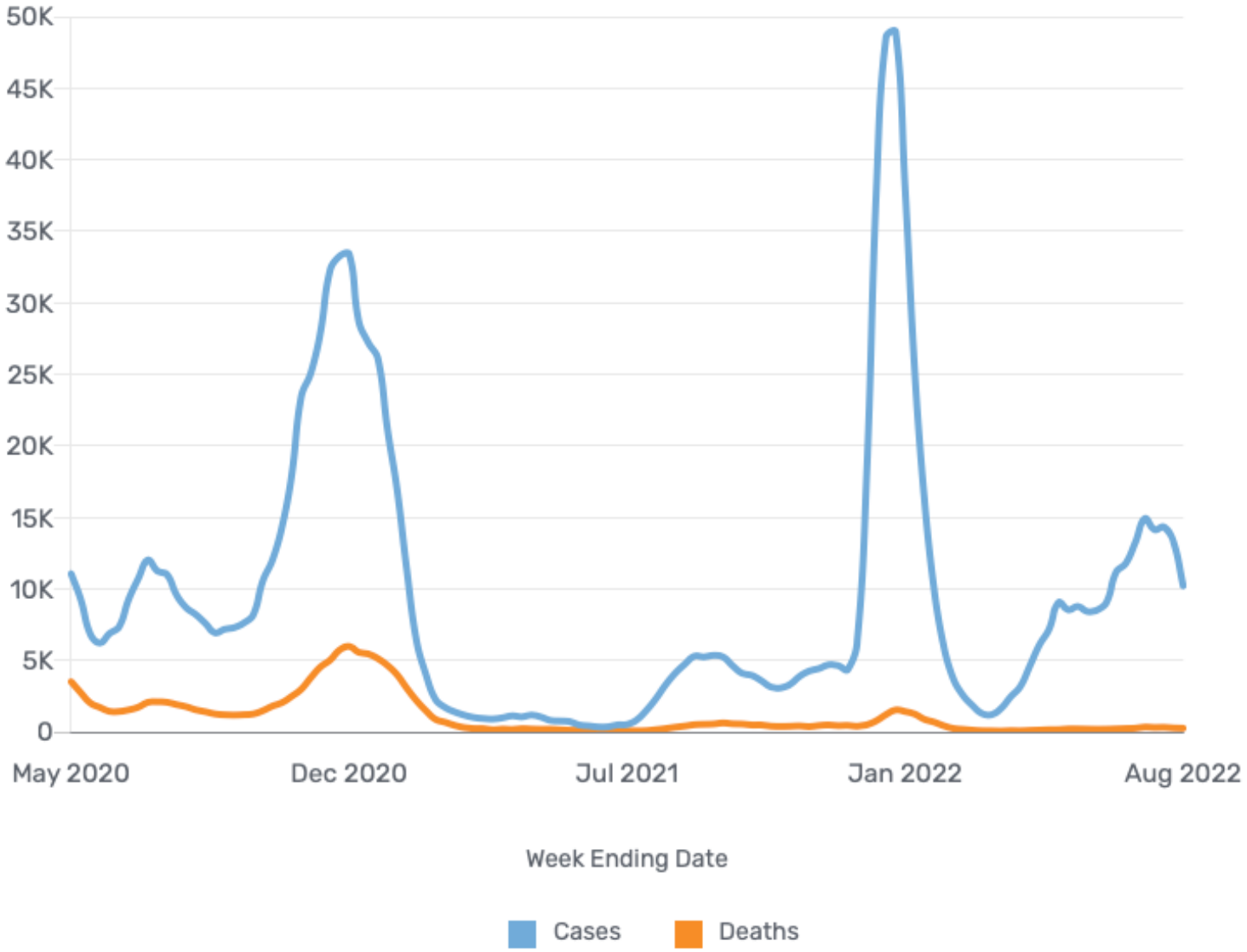
NOTE: LTCF death count is an undercount since this count excludes deaths in non-nursing home LTCF settings after June 30th, 2021 and also reflects some incomplete state reporting prior to that date. Some of the "All Other COVID-19 Deaths in the US" count likely reflect LTCF deaths that have not been categorized as such.

SOURCE: Long-term care death count is from KFF analysis of CMS COVID-19 Nursing Home Data, available state reports, press releases, and official state data through news reports. Total COVID-19 death count is from CDC. All data sources are as of January 30th, 2022.

KFF

Weekly Resident COVID-19 Confirmed Cases and Deaths

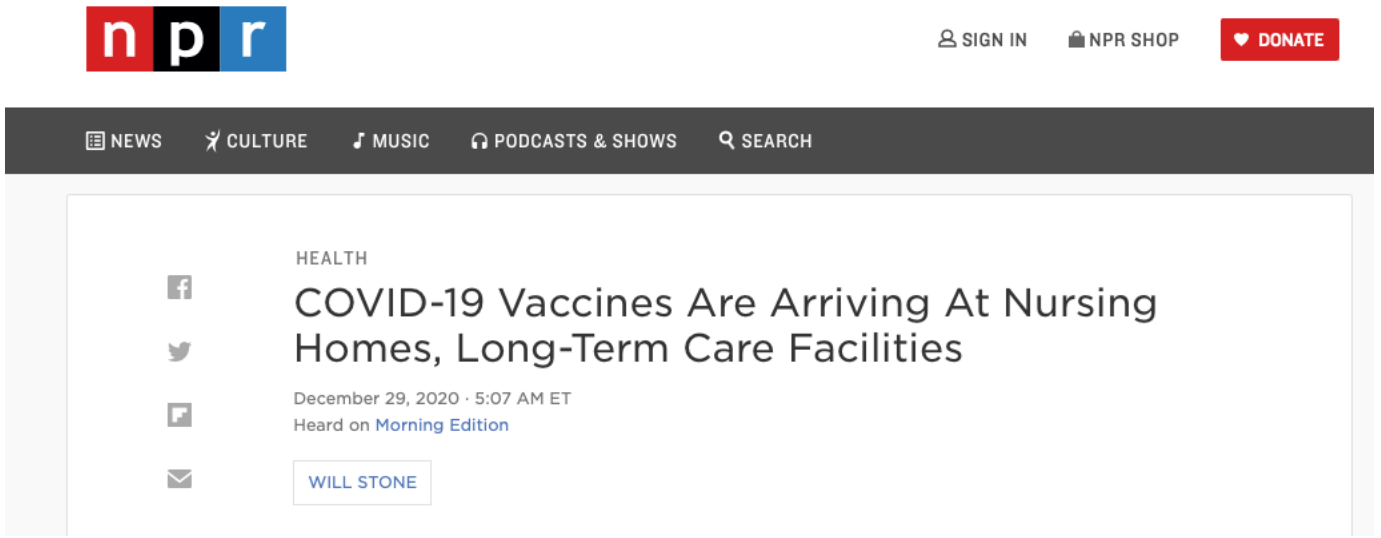
Note: The most recent week's data is considered preliminary and will be updated the following week.



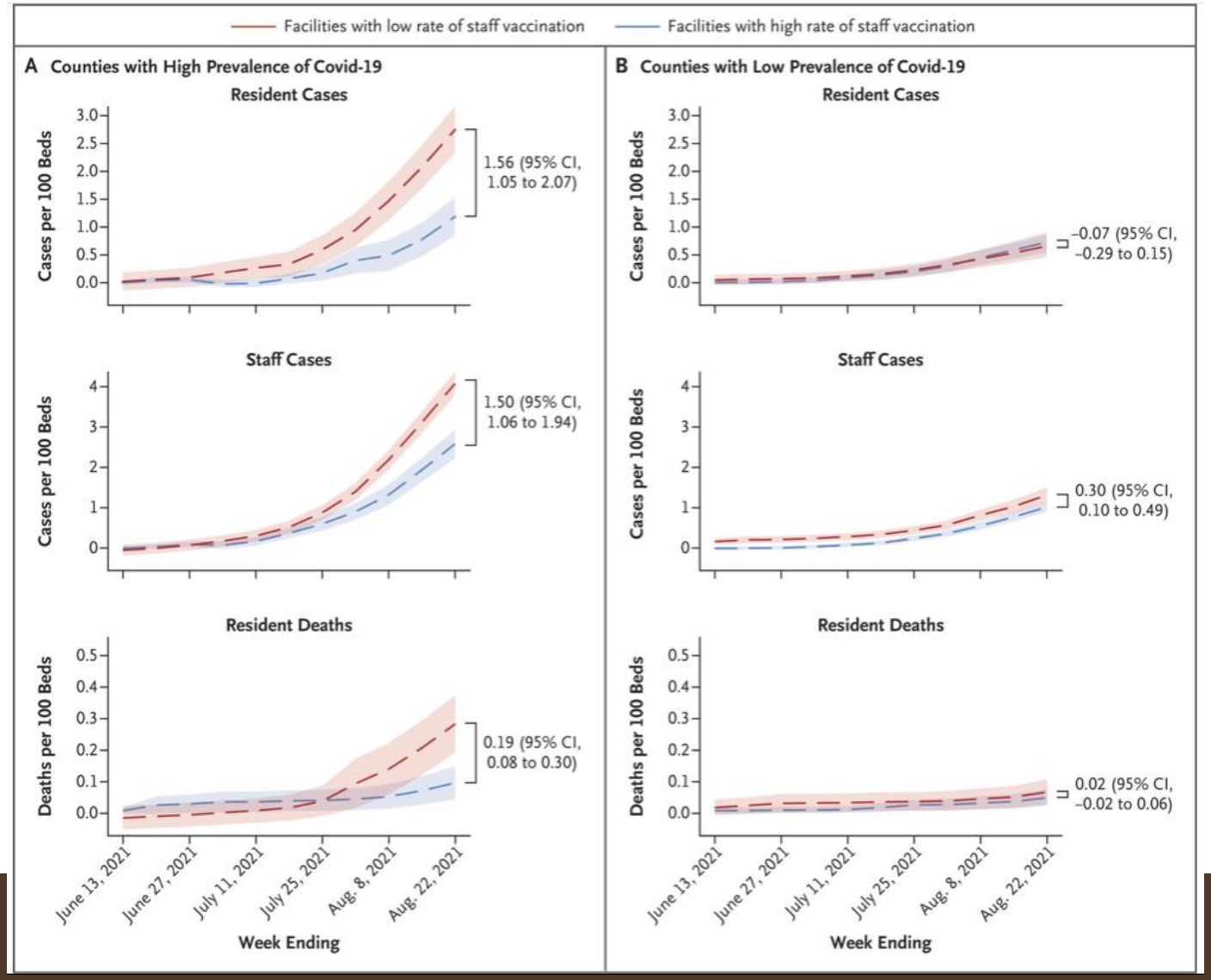
Pharmacy Partnership for Long-Term Care Program for COVID-19 Vaccination

12/01/2020

HHS/CDC is partnering with **CVS, Walgreens, and select pharmacies in the Managed Health Care Associates (MHA) network** to offer on-site COVID-19 vaccination services for residents of nursing homes and assisted living facilities once vaccination is recommended for them.



Staff Vaccination is Critical for Protecting Residents



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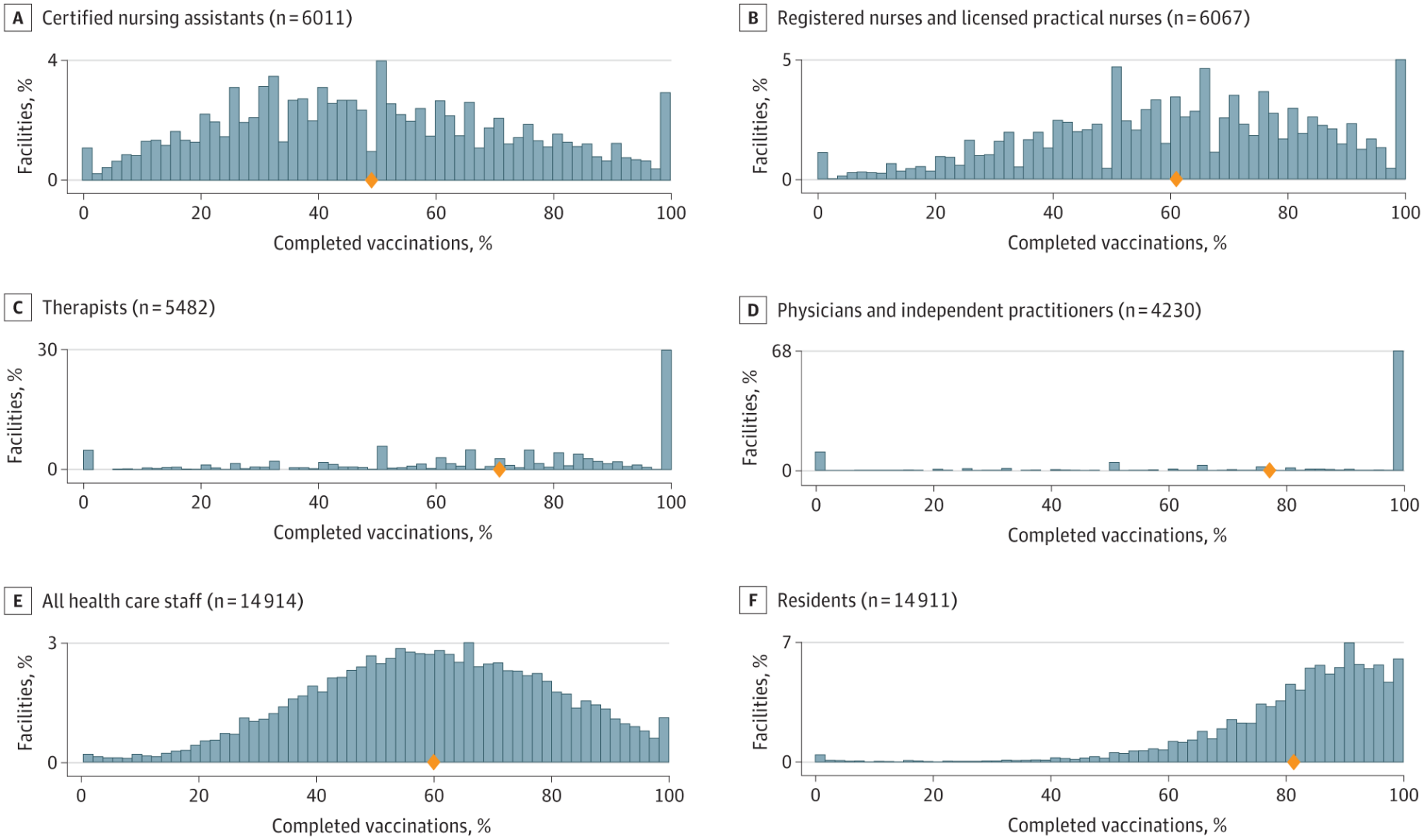
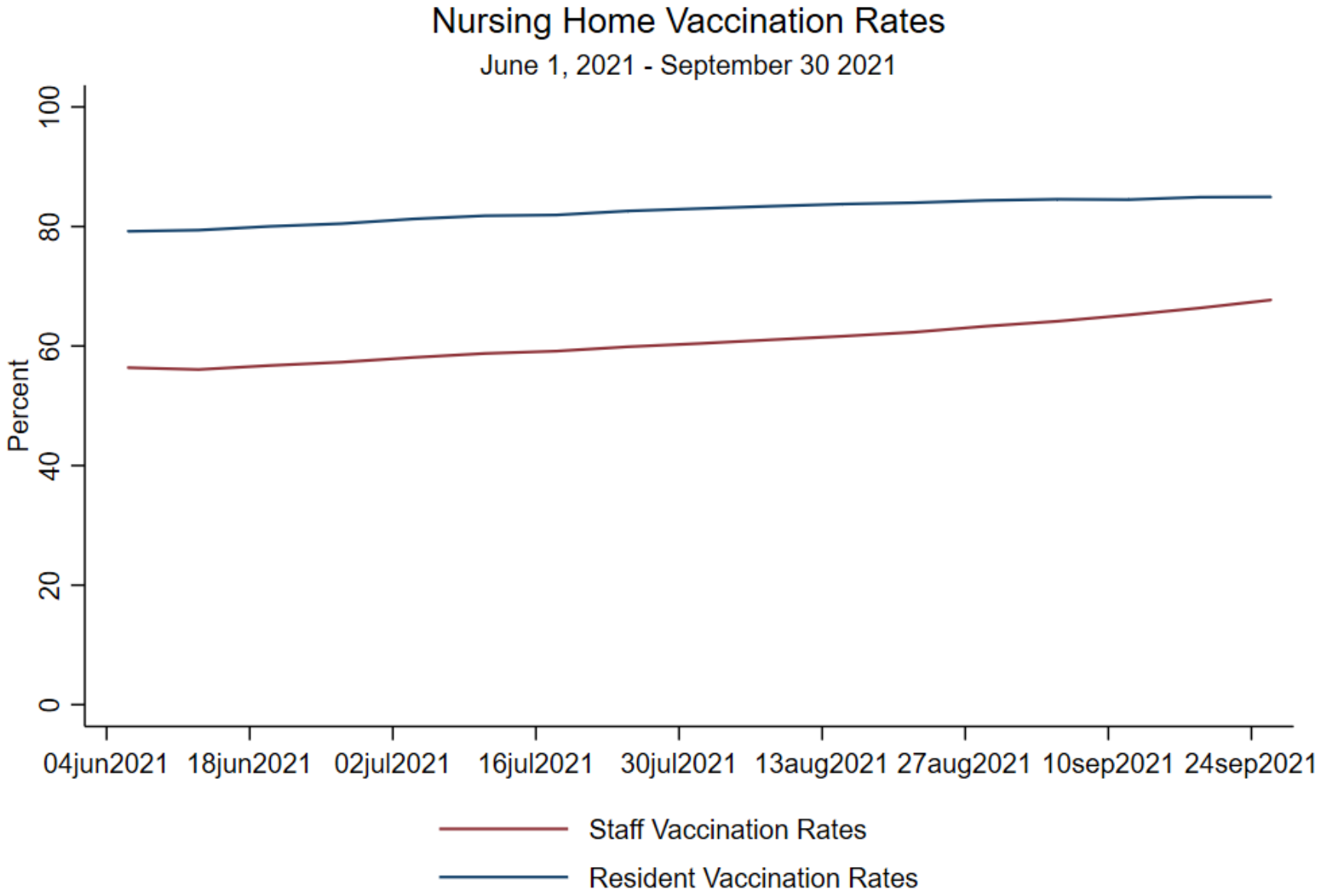


From: **Association of Nursing Home Characteristics With Staff and Resident COVID-19 Vaccination Coverage**

JAMA Intern Med. 2021;181(12):1670-1672. doi:10.1001/jamainternmed.2021.5890

Efforts to Increase Staff Vaccinations

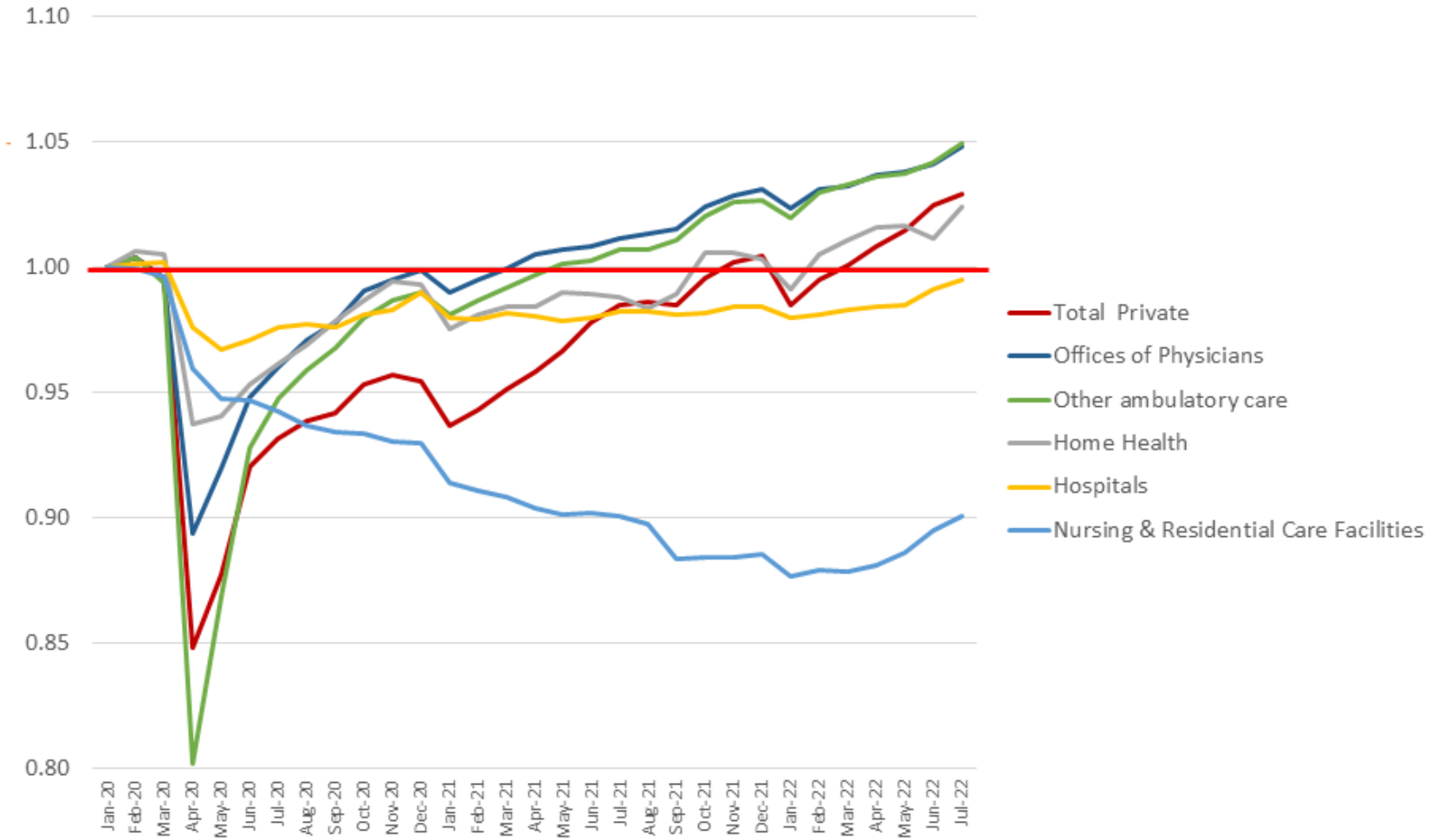
- Education
- Peer counseling
- Leadership counseling
- Incentives ($, raffles, “swag”, paid time off)


Nursing Home Vaccination Rates
June 1, 2021 - September 30 2021
Percent
0
20
40
60
80
100
04jun2021
18jun2021
02jul2021
16jul2021
30jul2021
13aug2021
27aug2021
10sep2021
24sep2021
Staff Vaccination Rates
Resident Vaccination Rates

Vaccine Mandates

- Individual facilities chains (Summer of 2021)
- State-level Mandates (Fall of 2021)
- Federal Mandate (Announced end of 2021, enacted in Spring of 2022)
- Why not sooner?

Relative Number of Employees by Sector, Jan 2020 to Jul 2022 (Jan 2020=1.00)



Source: Author calculation of Table B-1 Employees on nonfarm payrolls by industry sector and selected industry detail, Bureau of Labor Statistics, https://www.bls.gov/news.release/empsit.t17.htm

B Fronger, 2022

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HEALTH

Nursing homes worry Biden's vaccination mandate for workers could worsen staff shortages

Deborah Yetter and Christine Fernando USA TODAY

Published 6:02 a.m. ET Aug. 21, 2021

NEWS

Nursing Home Association Says Biden's Vaccine Mandate Could Be 'Disastrous Workforce' Issue

BY KATHERINE FUNG ON 8/19/21 AT 2:03 PM EDT

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Concerns persist that a Covid-19 vaccine mandate could exacerbate staff shortages at nursing homes.
Eric Lee/Bloomberg

Nursing Home Staff Shortages Linger as Vaccine Mandate Looms

Oct. 28, 2021, 5:36 AM

Listen

- Lack of aides, nursing staff at record levels in September
- Some unit, facility closures likely due to vaccine mandate

Tony Pugh
Reporter

Research Question

- What was the effect of state-level nursing home vaccine mandates on
  - Staff vaccination rates?
  - Staff shortage rates?
- Did effects vary by:
  - Whether the mandate was binding?
  - Local political climate?

Methods

Data and Measures

- Collected data on state mandates
  - Announcement date
  - Enactment date
  - Test out option
- National Healthcare Safety Network Data (NHSN)
  - Weekly staff vaccination rates
  - Weekly reports of staff shortages
- County-level 2020 election results
  - Republican = >50% Votes for Trump
  - Democrat = <50 for Trump

Analysis

- Event study design

- Estimate change in outcomes in before and after mandate announcement
    - Compared to observed changes in non-mandate states
    - Separate effects for mandate with/without test-out option with interaction terms

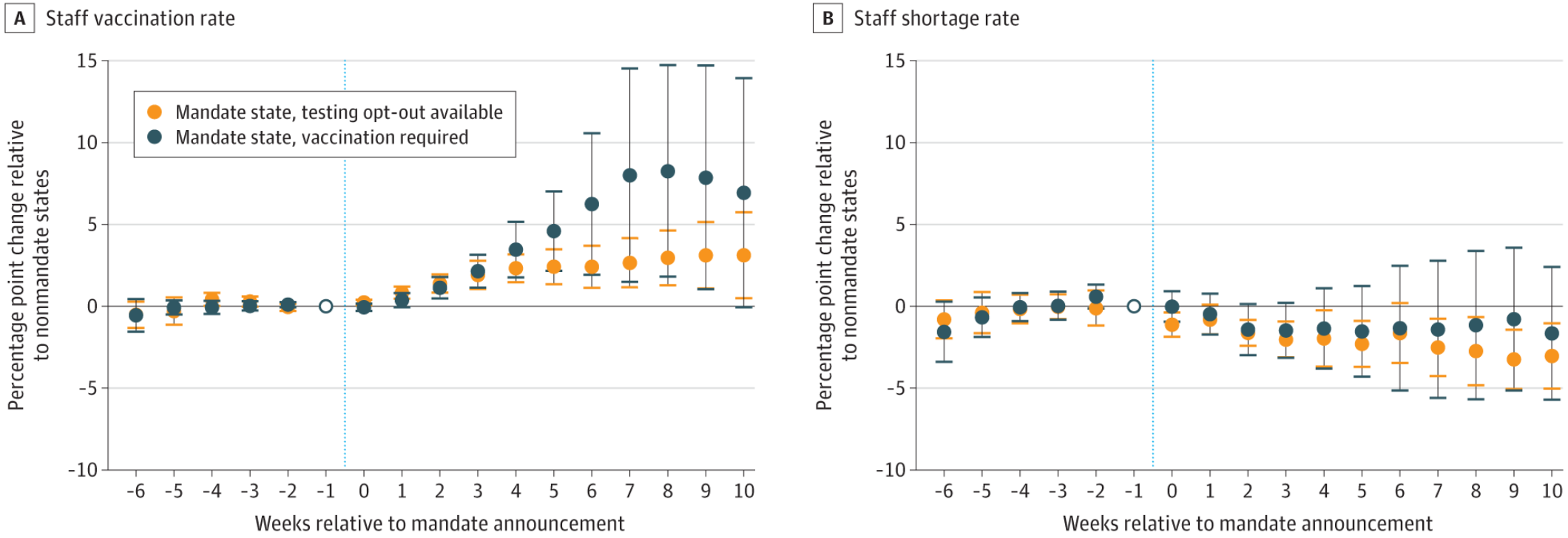
- Models contain facility and calendar week fixed effects

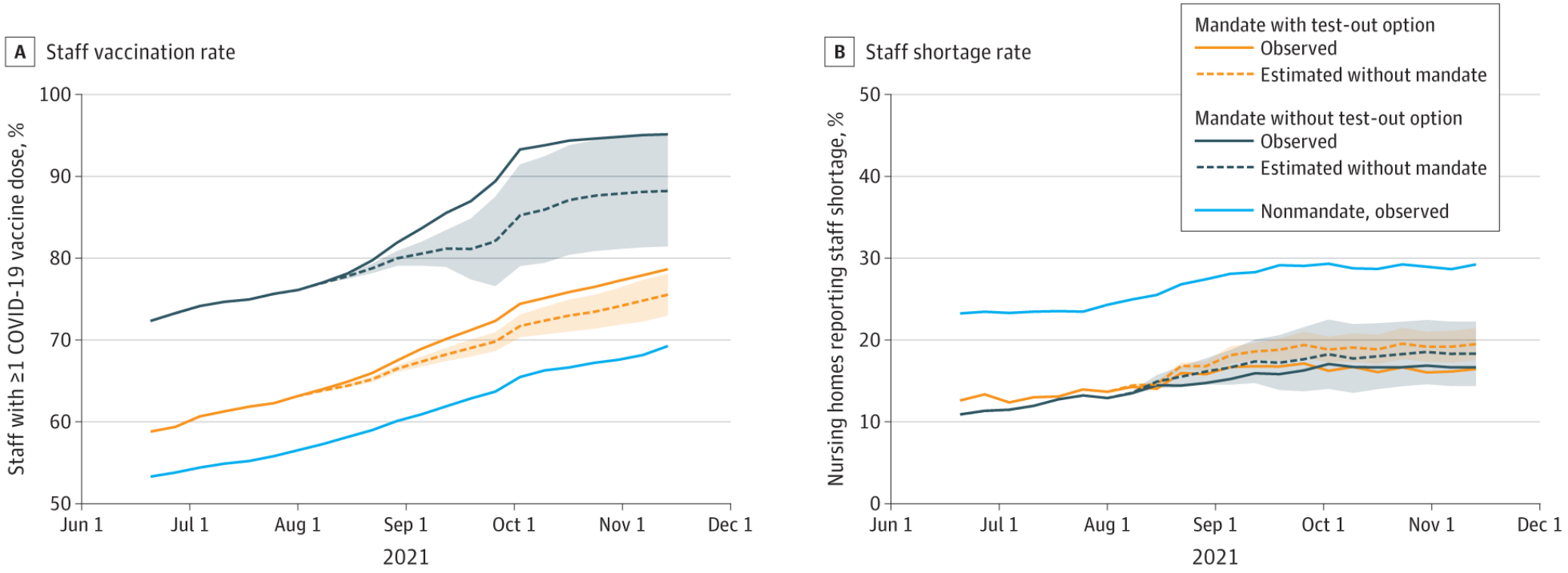
- Estimate separate effects for Republican/Democratic-leaning counties with interaction terms

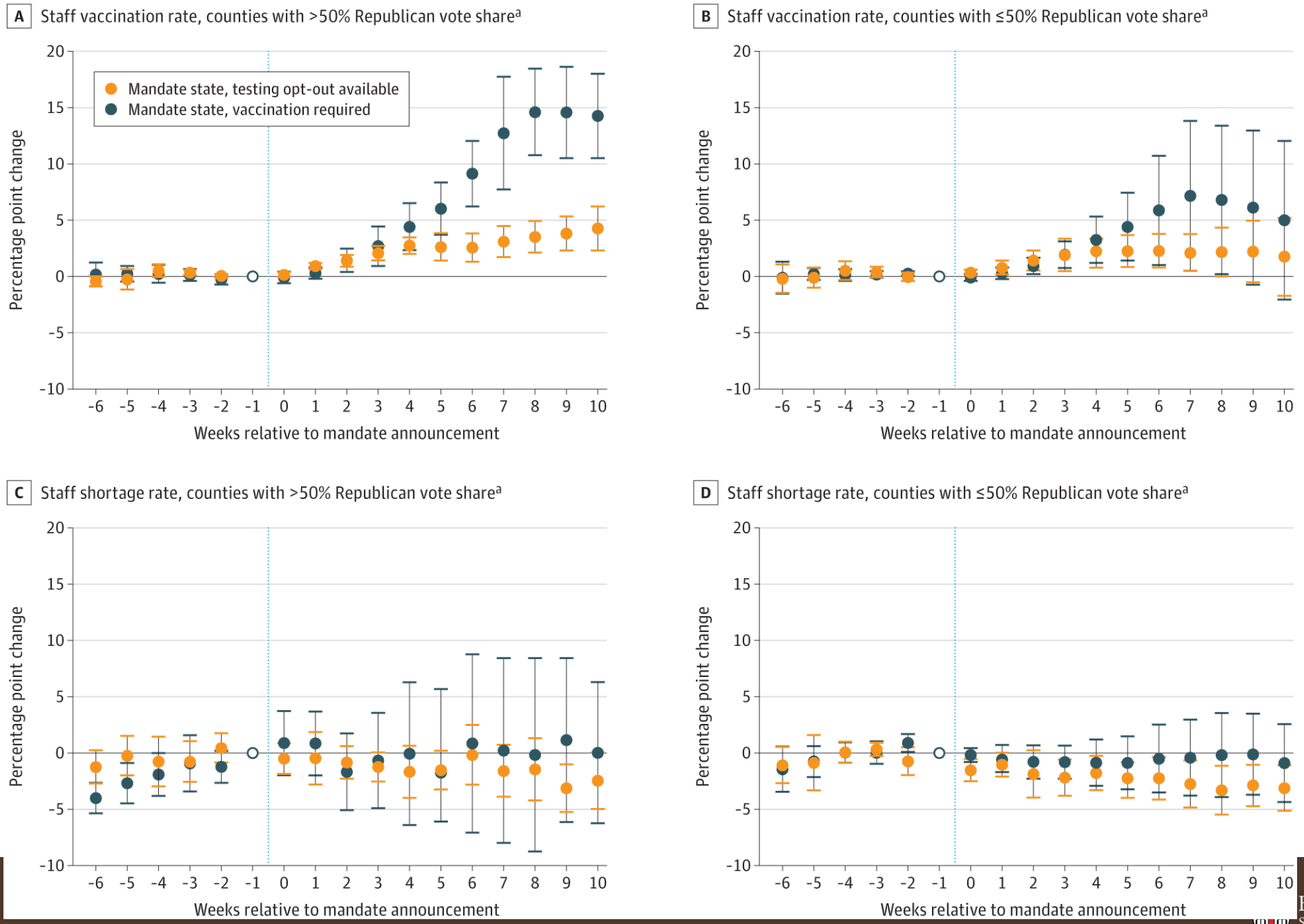
Results

Table. Characteristics of Study-Eligible Mandate States

State	Mandate type	Date of announcement	Date of enactment
California	No test out	August 5, 2021	September 30, 2021
Colorado	No test out	August 17, 2021	November 30, 2021
Connecticut	No test out	August 6, 2021	September 7, 2021
Delaware	Test out	August 12, 2021	September 30, 2021
Illinois	Test out	August 26, 2021	October 4, 2021
Kentucky	Test out	August 3, 2021	October 1, 2021
Massachusetts	No test out	August 4, 2021	October 10, 2021
New Jersey	Test out	August 6, 2021	September 6, 2021
New Mexico	No test out	August 17, 2021	August 23, 2021
New York	No test out	August 16, 2021	September 27, 2021
Oregon	No test out	August 19, 2021	October 18, 2021
Washington	No test out	August 9, 2021	October 18, 2021


A
Staff vaccination rate
Mandate state, testing opt-out available
Mandate state, vaccination required
Percentage point change relative to nonmandate states
15
10
5
0
-5
-10
-6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10
Weeks relative to mandate announcement
B
Staff shortage rate
Percentage point change relative to nonmandate states
15
10
5
0
-5
-10
-6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10
Weeks relative to mandate announcement


A
Staff vaccination rate
Staff with ≥1 COVID-19 vaccine dose, %
100
90
80
70
60
50
Jun 1
Jul 1
Aug 1
Sep 1
Oct 1
Nov 1
Dec 1
2021
B
Staff shortage rate
Nursing homes reporting staff shortage, %
50
40
30
20
10
0
Mandate with test-out option
Observed
Estimated without mandate
Mandate without test-out option
Observed
Estimated without mandate
Nonmandate, observed

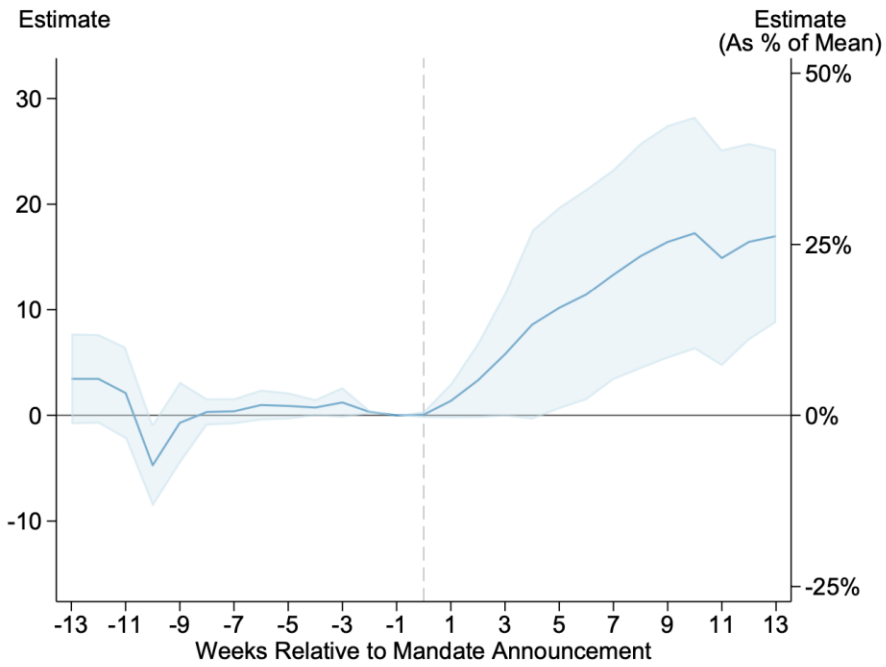

A
Staff vaccination rate, counties with >50% Republican vote share[a]
B
Staff vaccination rate, counties with ≤50% Republican vote share[a]
C
Staff shortage rate, counties with >50% Republican vote share[a]
D
Staff shortage rate, counties with ≤50% Republican vote share[a]
Mandate state, testing opt-out available
Mandate state, vaccination required
Percentage point change
Weeks relative to mandate announcement
20
15
10
5
0
-5
-10
-6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

Preliminary Analysis of Chain Mandates

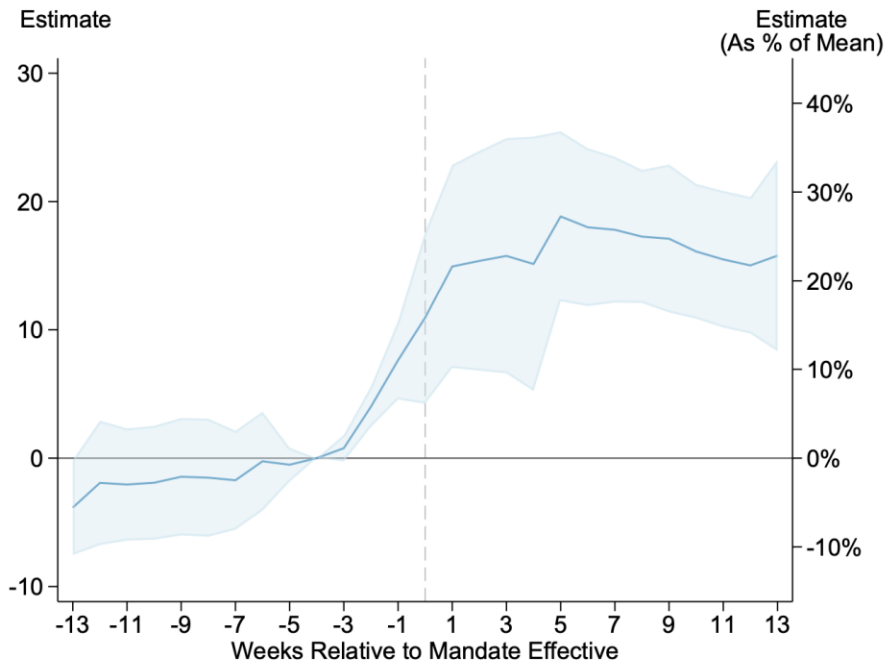
Overview

- Work led by Katherine Wen (Vanderbilt)
- Leverage employee-level payroll-based staffing data
- Mandates enacted by 13 large nursing home chains prior to state mandates

Staff Vaccination

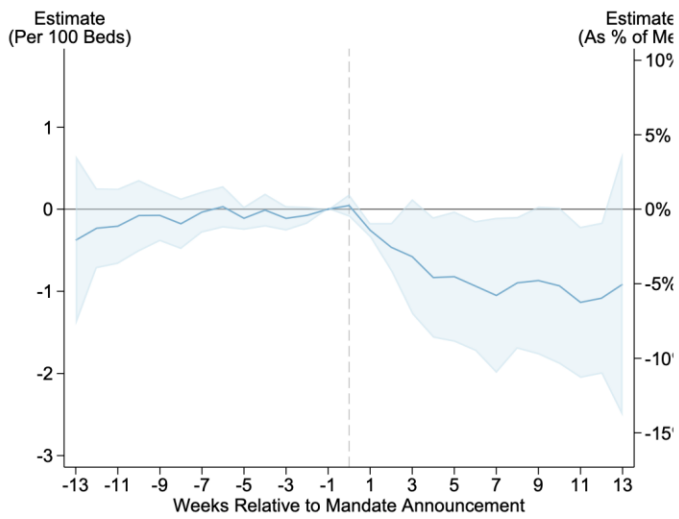


Around Mandate Announcement

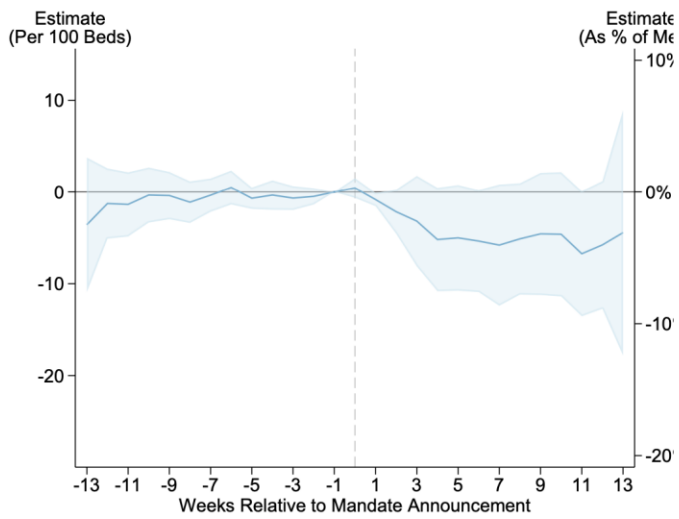


Around Mandate Effective

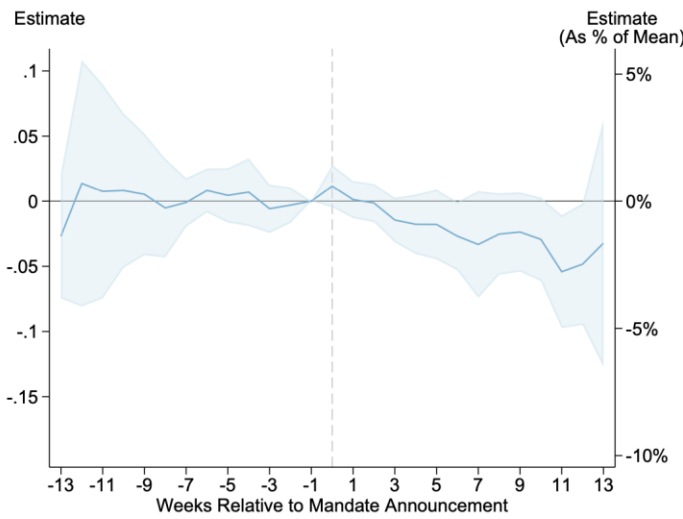
Staff and Hours Around Mandate Announcement Date



Staff

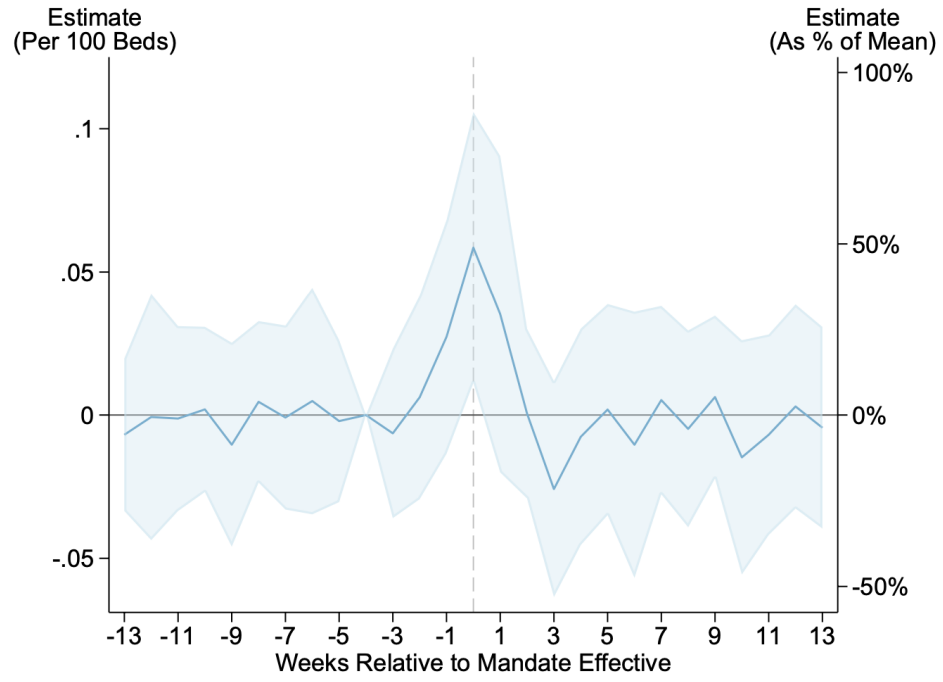


Hours

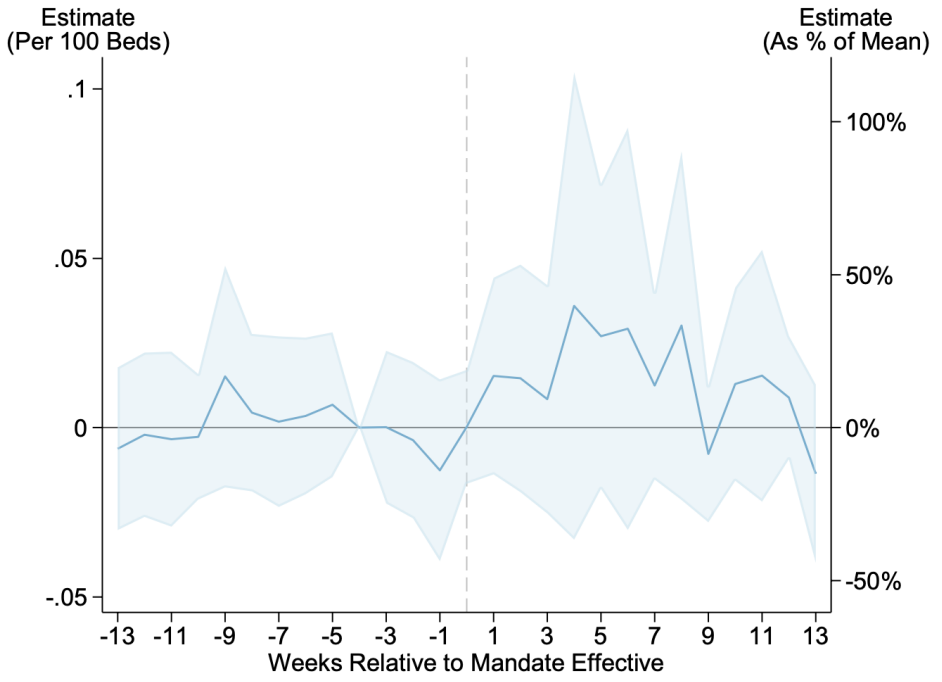


Hours Per Patient Day

Separations and Hires Around Mandate Effective Date



Separations



Hires

Discussion

Summary of Results

- Mandates significantly increase staff vaccination rates
  - Larger effects in Republican-leaning counties
  - Larger effects when mandate was binding
- No evidence of increased staff shortages
  - Supported by chain-level analyses with payroll-based staffing data

Policy Implications

- Mandates had intended policy effect
    - In contrast to other, non-compulsory efforts to increase vaccine take-up
- Vaccine hesitancy vs. refusal
    - Role of politics
- Federal mandate
- Booster mandates?
    - Massachusetts vs. New York

Submitted data as of the week ending 08/21/2022.

The Nursing Home COVID-19 Public File includes data reported by nursing homes to the CDC's National Healthcare Safety Network (NHSN) Long Term Care Facility (LTCF) COVID-19 Module: Surveillance Reporting Pathways and COVID-19 Vaccinations. For resources and ways to explore and visualize the data, please see the links to the left, as well as the buttons at the top of the page.

By the numbers

87.2%

National Percent of Residents with Completed Primary Vaccination per Facility

56.5%

National Percent of Residents Up to Date with Vaccines per Facility

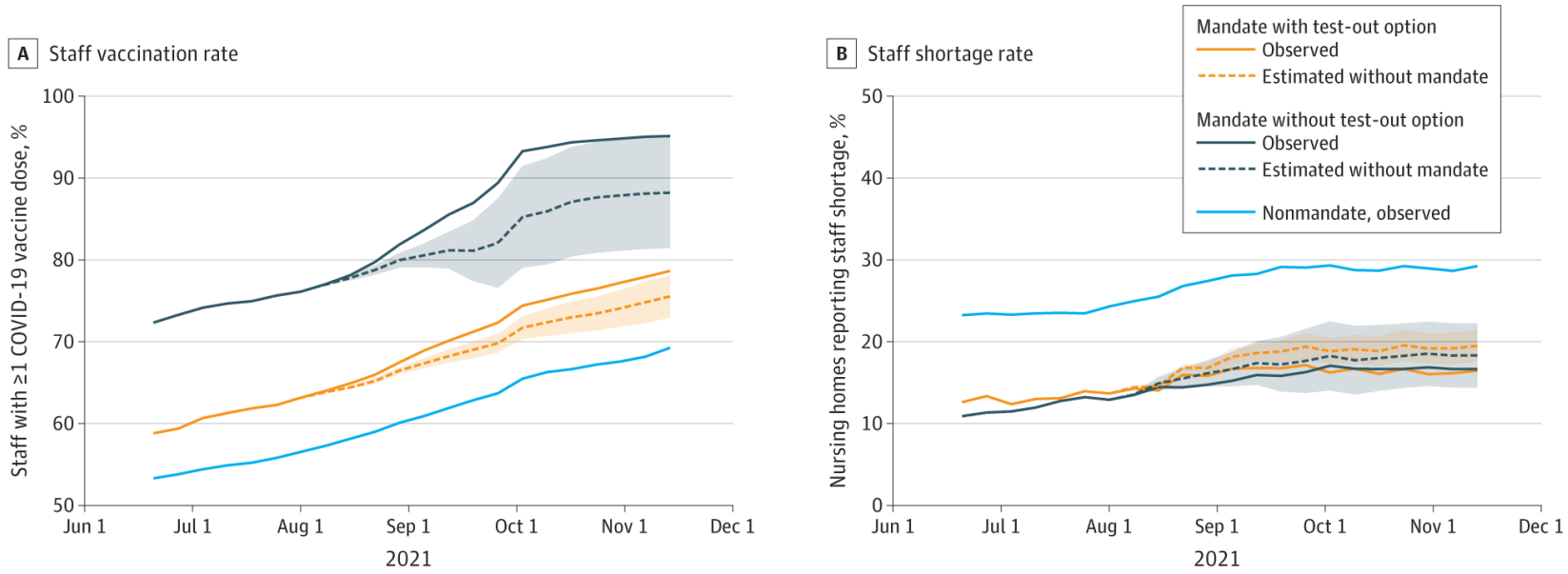
86.9%

National Percent of Staff with Completed Primary Vaccination per Facility

42.8%

National Percent of Staff Up to Date with Vaccines per Facility

Questions



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Extra Slides

CORRESPONDENCE

Incident SARS-CoV-2 Infection among mRNA-Vaccinated and Unvaccinated Nursing Home Residents

July 29, 2021
N Engl J Med 2021; 385:474-476
DOI: 10.1056/NEJMc2104849
Metrics

TO THE EDITOR:

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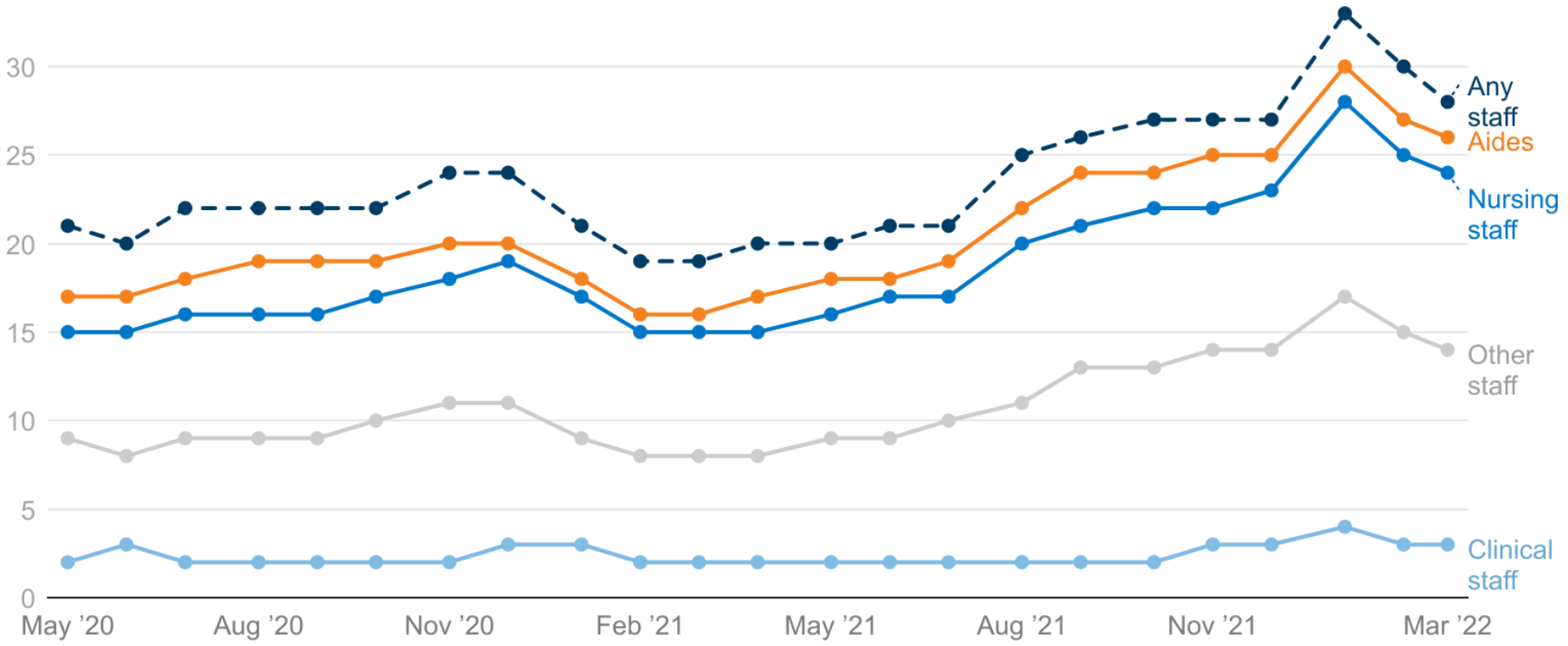
Table 1. Incident SARS-CoV-2 Infection among Nursing Home Residents According to Vaccination Status.*

Variable	Total	Asymptomatic SARS-CoV-2 Infection	Symptomatic SARS-CoV-2 Infection	Percent of Infected Residents Who Were Asymptomatic
Residents vaccinated with ≥1 dose				
No. of residents	18,242			
Positive test after receipt of first dose — no. (%)				
At 0–14 days	822 (4.5)	587 (3.2)	235 (1.3)	71.4
At 15–28 days	250 (1.4)	179 (1.0)	71 (0.4)	71.6
Residents vaccinated with 2 doses				
No. of residents	13,048			
Positive test after receipt of second dose — no. (%)				
At 0–14 days	130 (1.0)	110 (0.8)	20 (0.2)	84.6
At >14 days	38 (0.3)	29 (0.2)	9 (0.1)	76.3
Unvaccinated residents				
No. of residents	3,990			
Positive test after first vaccination clinic — no. (%)				
At 0–14 days	173 (4.3)	115 (2.9)	58 (1.5)	66.5
At 15–28 days	69 (1.7)	42 (1.1)	27 (0.7)	60.9
At 29–42 days	16 (0.4)	13 (0.3)	3 (0.1)	81.2
At >42 days	12 (0.3)	10 (0.3)	2 (0.1)	83.3

Figure 1

Share of Nursing Facilities Reporting Staffing Shortages, May 2020-March 2022



NOTE: Data points are limited to the last week of reported data for each month. Peak shortage of 34% cited in the text occurred in the week of January 23rd, so it is not shown explicitly in the figure. See methods for details on data and analysis.
SOURCE: KFF analysis of CMS COVID-19 Nursing Home Data, as of the week ending on 3/20/2022

KFF

Impact of COVID-19 on the Patient Driven Payment Model in the US

Amy Meehan, Emily Gadbois, Joan Brazier, Momotazur Rahman, David Grabowski, Renee Shield

September 10, 2022

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Agenda

- Background on Medicare/Medicaid
- Background of the Patient Driven Payment Model (PDPM)
- Results:

  PDPM prior to COVID-19

  Impact of COVID-19 on PDPM

Background of Medicare/Medicaid in the US

Medicare & Medicaid Background

- **The Medicare and Medicaid Act** was signed into law in the US in 1965 to provide health coverage and increased financial security for Americans not well served in an insurance market characterized by employment-linked coverage.

- **Medicare** is for older adults.

- **Medicaid** is for people with limited income of any age.

Medicare Plan Options

- **Original Medicare, managed by the federal government**
  - Part A: Hospital Insurance, covers inpatient care at a hospital, nursing home care, skilled nursing facility care, hospice care, & home health
  - Part B: Medical Insurance, covers medically necessary services and preventative services
  - Part D: prescription drug coverage

OR

- **Medicare Advantage (also referred to as MA, Part C, or Managed Care), offered by private companies**
  - bundles Part A, Part B, and usually part D

Background of PDPM

The PDPM background & goals

- The previous payment system primarily used the volume of therapy services provided as the basis for payment.
- PDPM is a new system for classifying skilled nursing facility (SNF) patients in a Medicare Part A covered stay into payment groups
- Effective October 1, 2019
- **Goal: focus on the patient's unique, individualized needs rather than the volume of services provided in order to improve payment appropriateness**

Methods

Methods- same as what Emily previously described:

- **Interview procedures**
  - 156 total interviews completed: 4 virtual or phone interviews with administrators per SNF over 1-year period
  - Conducted between July 2020 and December 2021
  - Interview protocol included questions about implementation of the PDPM and the impact COVID-19 had on the PDPM

- **Analysis**
  - A preliminary coding scheme based on interview questions was developed and adjusted iteratively
  - Four researchers independently coded transcripts, meeting in

Results

Results- Preparation prior to PDPM implementation

"The implementation was good for us because we started preparing for it a year in advance before it rolled. And then we were doing a side by side comparison, and then we implemented some of the care planning techniques and admission intake processes before it actually hit." S4N2.1v1_9-17-20

"We call them the MDS nurses, they had to do, as well as the members of the nurses leadership team, had to do like a PDPM training and take a test at the end to test their knowledge, as well as our medical records person for the coding for PDPM." S2N2.1v1_10-9-20

Results- Implementation of PDPM prior to COVID

"It was more of a seamless transition because we had been planning for it." S3N3.1 _1-14-21

"*We were caring for people previously that were very, very compromised from a pulmonary/respiratory perspective. We were floundering under the PPS system [the old payment system] with relatively low reimbursement rates and, overnight, saw an immediate difference in the reimbursement for the type of people we were taking care of.*" S2N3.1v1_10-22-20

Results- Impact of COVID on PDPM

- COVID forced PDPM to the backburner
- No Impact for SNFs without COVID+ patients
- Greater PDPM reimbursement from COVID+ patients
- Less admissions overall, particularly short term admissions
- 3-day hospital waiver
- Higher acuity patients
- Less group therapy than planned, more in-room therapy
- Staffing strained
- As COVID lessens, focus on PDPM returns

Results: COVID put PDPM on the backburner

"*It [PDPM] was really, really a big deal and a big focus for us. And it took a lot of our attention, and it really has faded to the background, almost completely for me. COVID has become number one, number 10, number 20, and PDPM is number 36.*" S4N5.1v1_11-5-20

"*We were thinking about doing a true cardiac rehab. But, that takes a lot of equipment. While we were looking and working and planning for that, then all of those dollars got reallocated because now I've got to have screening people I didn't have to have before. Now I've got to have all this PPE we didn't need before. And oh by the way, now we're having to do all this more cleaning. So, we're having to buy cleaning supplies. Everything that went with that. There's between like $200 and $250,000.00 a month that we're spending that we hadn't anticipated on COVID type stuff that we had not anticipated for.There's 2 1/2 million that I was going to use for something else that just now has gone poof.*" S3N2.1v1_10-28-20

Results: No impact in SNFs without COVID-19 residents

"Because we've not had the COVID here, so our PDPM hasn't changed at all." S3N4.4v1_11-10-21

"Of course we don't see COVID positive residents here. It does not affect me that much. Facilities that keep COVID positives, it is tremendous with PDPM in getting bigger reimbursement for COVID positive residents." S7N3.2v1_2-9-21

Results: Greater reimbursement from COVID+ patients

"The buildings that either were strickened by COVID and were able to take COVID patients strictly because they had it in their building did a little bit better [financially] than buildings that were fighting hard to keep COVID out. So it was kind of a Catch-22. Financially, if your business wants to thrive you got to have the sickest people in house, and during the pandemic those were the people that had COVID. But yet, if you really want to shine and show the community and the Department of Public Health and everybody else that you were keeping your residents safe, well, that meant you had no COVID in your building. So it was kind of a real polar opposite type of a scenario." S2N3.4v1_7-21-21

Results: Less admissions overall, particularly short term admissions

*"But, as far as our admissions go, what happens now… And this is COVID, not PDPM, is we have to keep people alone in a room… So that reduces our ability to take people in…So it's really hard, knowing that census means everything."*S6N2.1v1_9-11-20

"Where normally we might have like upwards of 10 Medicare on any given day, we're lucky if we have three to five now, so it's not a lot. And I do think it's again, because people are going home and that sort of a thing- a lot of them, they don't want to quarantine. So once you come here, if unless you're considered a COVID-recovered patient, you're going right into quarantine where you're not leaving the room for 14 days or see your family outside of FaceTime and phone calls. So yeah, that's not something that a lot of them want to do." S1N3.3v1_1-19-21

Results: Waiver of the 3-day hospital stay

"CARES Act was the 1135 waiver that was implemented to assist nursing homes with using Medicare services without a three-day stay. And so we were able to use that for our long-term care residents that are private pay. And so if they had COVID within their living environment in long-term care, they didn't have to go to the hospital and have a three-day qualifying stay to use Medicare. But we would move them from their private pay to the Medicare area and use their Medicare benefit that way. That was good because then, we don't have to send a resident to the hospital and disrupt their living just to get the three-day stay. It's waived now. We can just move them as long as they have a skilled need. So we would have to determine the skilled need and move them into the Medicare area. And so that was a positive move because we were able to achieve so much more and much more quicker." S4N2.1v1_9-17-20

Results: Higher acuity patients

"Rehab patients are going home because of COVID, they don't want to run the risk of being in a group setting or hospital setting. Most are going directly from the hospital to home. So the patients that we are getting are truly very ill." S2N2.1v1_10-9-20

"The acuity is definitely higher since COVID and it went up, I would say even higher since the Delta variant because the hospital's still backed up so they got to get people out to have room for sicker people." S6N5.3v1_9-17-21

"I think that we are seeing higher acuity patients because our facility specializes in COVID recovering patients and so they definitely are compromised and so we do see some higher needs in those patients for sure." S5N3.2v1_3-10-21

Results: Less group therapy, more in-room therapy than anticipated

"I would say that one of the biggest challenges that PDPM faces since COVID, has been our ability to provide therapy in the way that it should be provided because of isolation and because of our infection control process we've had to change from using… We have a really nice physical therapy gym here. It's very well outfitted, it's a huge space, it's a beautiful gym. Well, we can't have people who are under quarantine walking around in close proximity to each other because you don't know who might be incubating COVID and or has it and it hasn't been tested. That in and of itself, I think, was the biggest challenge PDPM and COVID, now you had to do that level of short-term rehabilitation, PT/OT/Speech in a person's room. A person's room isn't necessarily the most ideal open space for therapy."
S2N3.3v1_4-23-21

Results: COVID strained staffing needed for PDPM

"You have certain assessments that need to be done within 24 hours or 48 hours. And when you're on a skeleton staffing, because of COVID, trying to get those assessments done timely, was probably the biggest challenge. Because if you didn't get them done, then you're penalized and/or you don't get the rate that you should receive." S2N2.4v1_7-16-21

"We're short-staffed in therapy as well….I don't have somebody else to do another half hour even if that's potentially the best for you, going to promote the best outcome. So, the staffing and COVID have limited the ability to work the system to a big degree." S6N5.3v1_9-17-21

Results: As COVID lessens, focus on PDPM returns

"*We have been able to pour a little bit more attention and focus into maximizing our reimbursement rates now that we're not quite so preoccupied with COVID restrictions.*" S5N5.4v1_12-2-21

"*And we're really trying to focus on the diagnoses, just kind of getting all the PDPM stuff back up and running where it should be, which we couldn't really do last year because we didn't have the time to do it. We just went through some PDPM training last week, just kind of a refresher on how it all works and how we put in diagnoses and you know everything that we have to do with PDPM.*" S4N4.3v1_4-13-21

Conclusion

Conclusion

Takeaway messages:

- COVID put PDPM on the backburner for SNFs
- COVID decreased short-stay census in many SNFs, thereby affecting potential for PDPM reimbursement
- SNFs with COVID+ patients were reimbursed at a higher rate
- Some SNFs without COVID+ reported little to no impact

Conclusion

Questions for policy and practice:

- As COVID lessens and the ability of SNFs to focus on the PDPM returns:
  - will SNFs begin to rebuild their short-stay Medicare census to pre-COVID levels?
  - what will be the true financial impact of the PDPM?
  - should significant modifications to PDPM wait until COVID stabilizes?

Thank You

Insert Contact Information (if applicable)

other themes to include (or save for paper)

Greater focus on coding for reimbursement

"We continue to use the MDS coordinator doing the depression screen. And as a matter of fact, it has been a practice that has been adopted company-wide now. Prior to this, the social workers were doing it. And social workers are wonderful people, but there is evidence that they weren't always capturing it correctly, and so the results were getting skewed. Whether that's because they knew the resident and were making inferences that maybe somebody who is very skilled at assessing, which an MDS coordinator is, won't make inferences, they will ask the questions and take it for face value. I think, also, social workers have a stigma that they don't want their residents to be depressed. Because that reflects poorly… on the social services. And with COVID our residents should have been more depressed." S4N3.3v1_4-9-21

"I think what we've done is we've looked at COVID and PDPM and tried to figure out how do we maximize this opportunity, particularly since now we are having this large volume of COVID patients. So from a PDPM standpoint, as an example we need respiratory starting on day one. So let's get that process implemented. When they come out of isolation, then are we rolling in our restorative program? In addition to therapies that we're maximizing some of those things. Really talking with both nursing and social to help identify, are we seeing anything in the way of depression that might help trigger some more increase in our scores? Because if you get a diagnosis of COVID, obviously you're upset, you're depressed, and all that. So we are utilizing COVID-19 to look at our PDPM processes and try to really bulk those up, knowing that at some point, this will become a very small part." S3N2.2v1_1-27-21

Impact on relationships with hospitals

"*Well, certainly because now we're in the dead middle of pandemic, much of our patient population and admission has been focused on COVID positive patients. As of right now hospitals are just busting at the seams with all these patients that are ready to discharge and yet not enough beds in the SNFs, that has really impacted I would guess our relationships with our hospitals and the ability to take on more patients.*" S8N3.2v1_1-15-21

other themes to include (or save for paper), cont.

Changes to length of stay

"I think it's [length of stay] better than normal because of COVID. I think I'm getting probably on average 5-7 more days for managed care patients because of COVID. Something I do know, once this winds down, it's going to be back to the old 11-14 days for managed care." S3N1.4v1_5-10-21

"*With COVID, what happened was a lot of those patients that got here for the short-term and to rehab and recover, they were gone in the seven or 10 days. Because of COVID, they wanted out of this building."* S7N2.4v1_7-15-21

Spillover effects of the Patient Drive Payment Model on therapy delivery among Medicare Advantage enrollees in skilled nursing facilities

Brian McGarry, PT, PhD

ILPN Conference 2022

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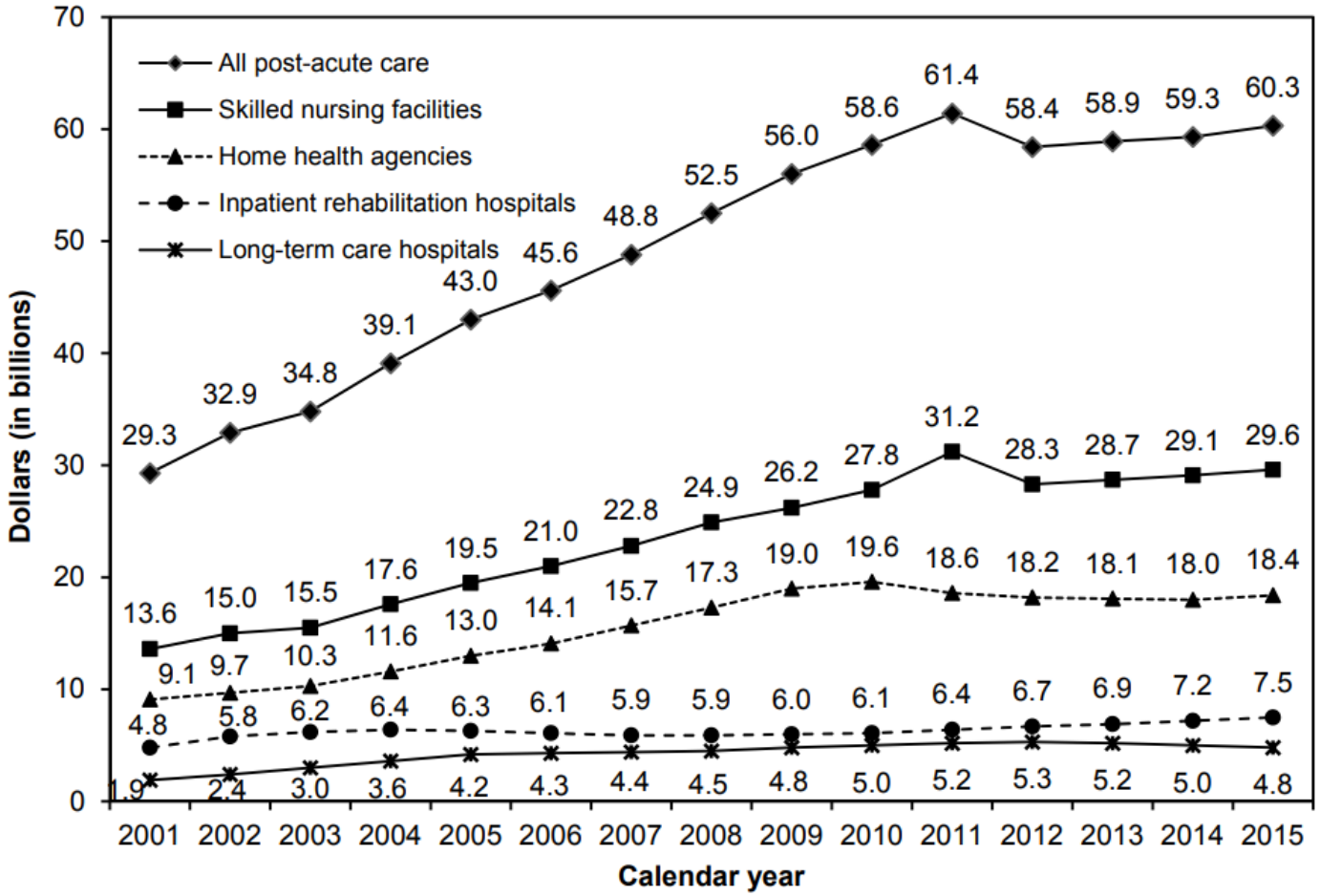
  - Linda Resnik
  - Elizabeth White
  - Christopher Santostefano
  - Peter Shewmaker
  - David Grabowski

Background

U.S. Nursing Homes

- ~15,000 facilities
- Skilled Nursing Facilities (SNFs)
- Serve two distinct populations
  - Short-stay patients who are recovering/rehabbing from an injury or surgery that resulting in a hospitalization
    - Post-acute Care
  - Long-stay residents who are no longer able to live in the community independently or with support and live in the SNF indefinitely

Chart 8-2. Growth in Medicare's fee-for-service post-acute care expenditures has slowed since 2012

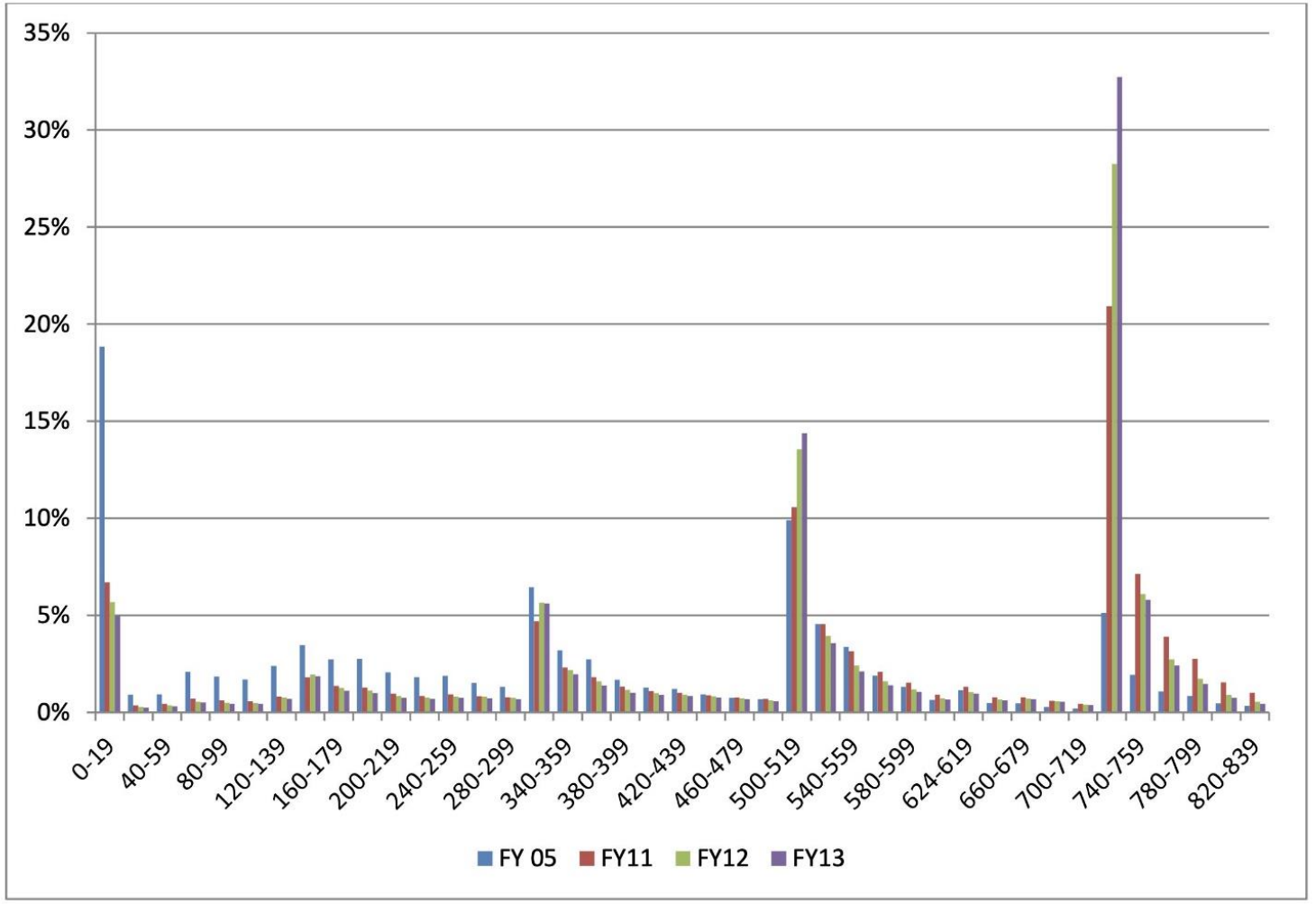


Note: These calendar year–incurred data represent only program spending; they do not include beneficiary copayments.

Source: CMS Office of the Actuary 2017.

Exhibit 2 Daily rates of discharge from skilled nursing facilities (SNFs) in the study population of fee-for-service Medicare beneficiaries, by exposure to cost sharing

Figure 2: Allocated Therapy Minutes per Beneficiary, All Intervals



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Payment reform

- Patient-Driven Payment Model (October 2019)
- Payments no-longer tied to the amount of therapy delivered
- Payments determined prospectively based on expected costs at the time of admission
    - Expected nursing and therapy needs, case-mix adjustment
- Meant to be budget neutral
- Drastic change to the financial incentives to deliver therapy in SNF
- Only applies to traditional (fee-for-service) Medicare enrollees

NURSING HOMES

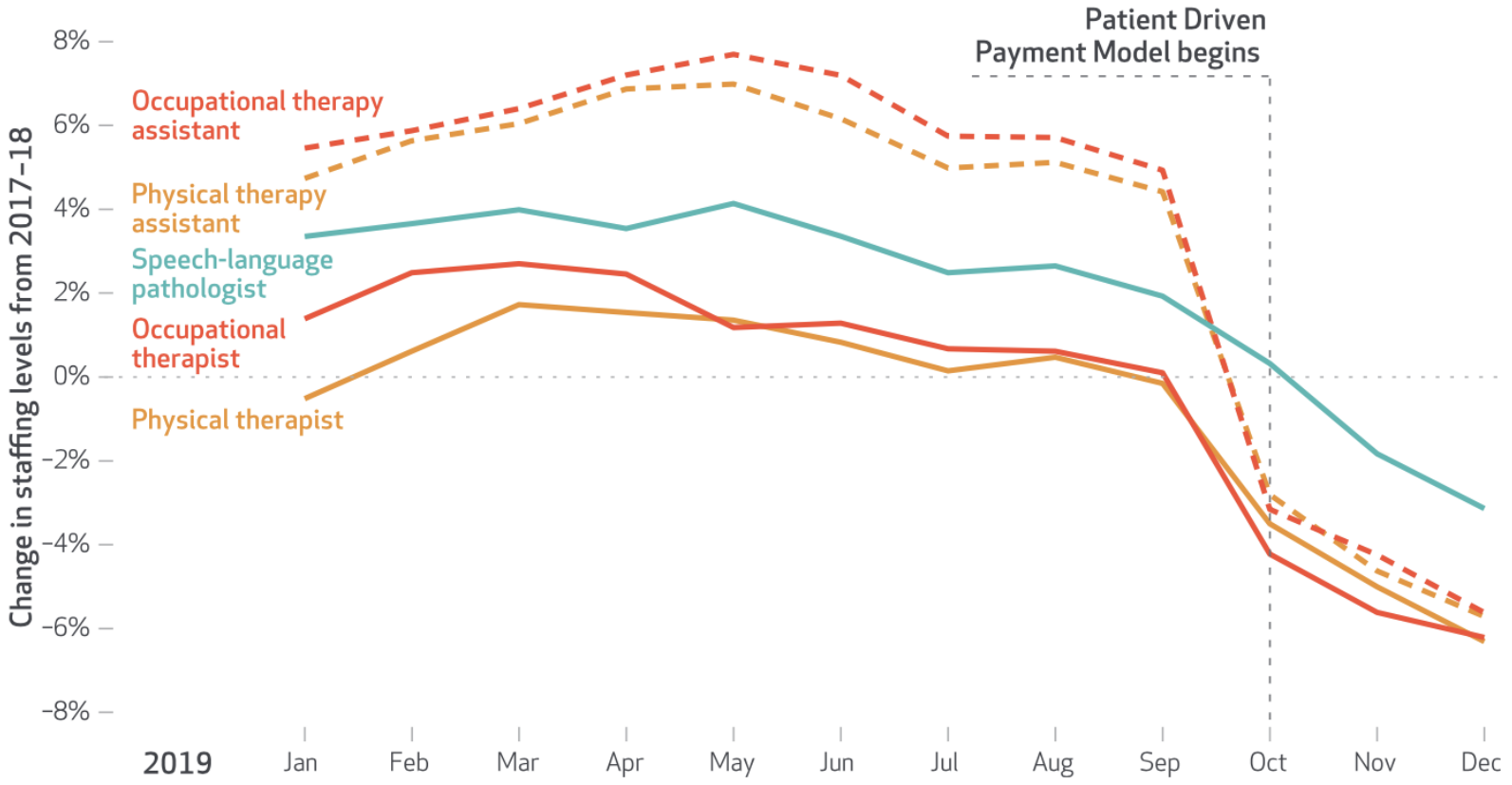
By Brian E. McGarry, Elizabeth M. White, Linda J. Resnik, Momotazur Rahman, and David C. Grabowski

DOI: 10.1377/hlthaff.2020.00824
HEALTH AFFAIRS 40, NO. 3 (2021): 392–399

Medicare's New Patient Driven Payment Model Resulted In Reductions In Therapy Staffing In Skilled Nursing Facilities

EXHIBIT 2

Percent change in monthly staffing levels in US skilled nursing facilities between 2019 and 2017–18, by type of staff



SOURCE Authors' calculations using data from the Centers for Medicare and Medicaid Services Payroll Based Journal and the Minimum Data Set. **NOTES** Staffing levels are defined as clinician hours per short-stay resident day. Monthly staffing estimates are adjusted for differential staffing on weekends and facility fixed effects.

JAMA Health Forum™

Original Investigation

Association Between the Patient Driven Payment Model and Therapy Utilization and Patient Outcomes in US Skilled Nursing Facilities

Momotazur Rahman, PhD; Elizabeth M. White, APRN, PhD; Brian E. McGarry, PT, PhD; Christopher Santostefano, BSN, RN; Peter Shewmaker, ScM; Linda Resnik, PT, PhD; David C. Grabowski, PhD

Abstract

Key Points

Question Was the Patient Driven

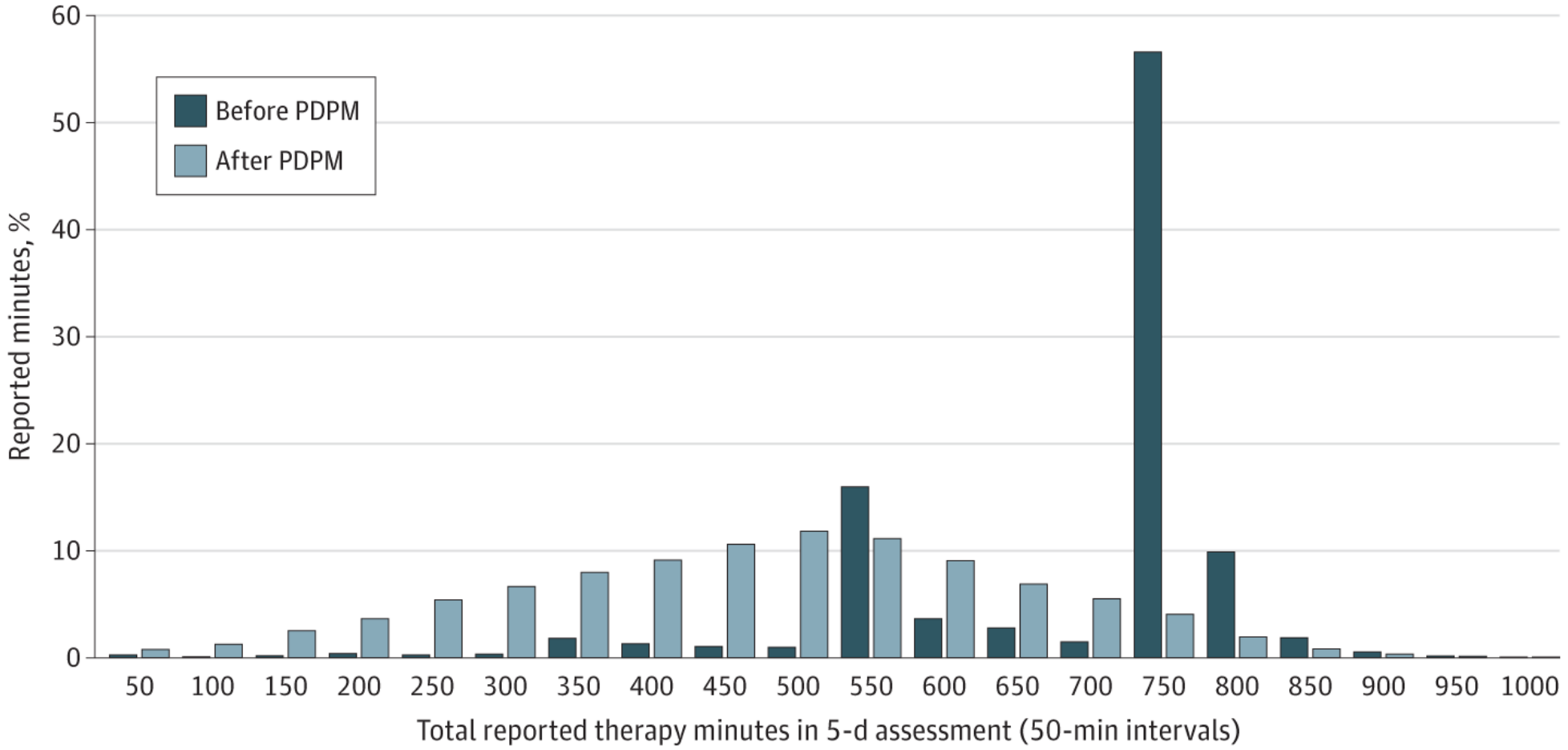
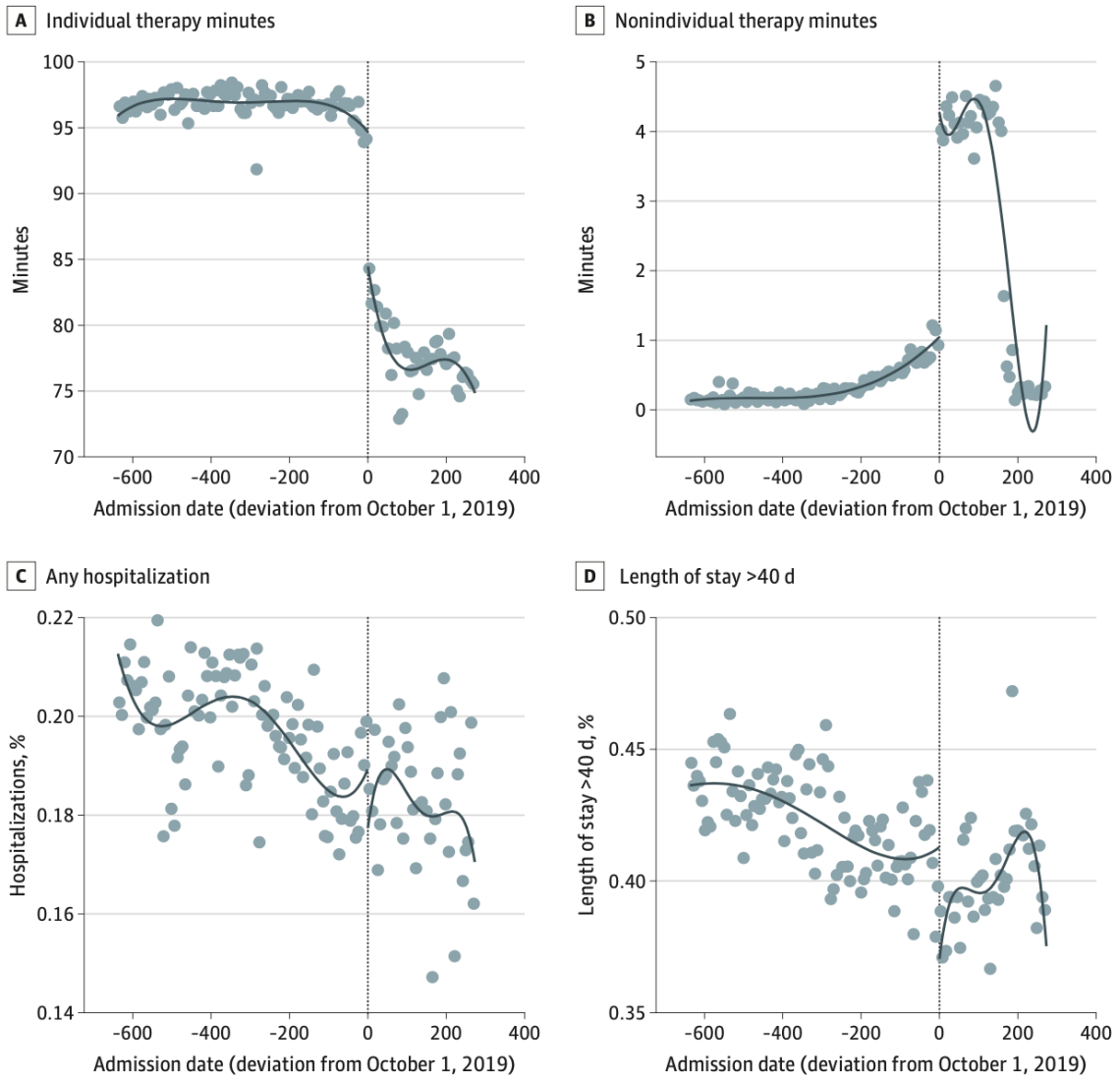

Before PDPM
After PDPM
Reported minutes, %
60
50
40
30
20
10
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
Total reported therapy minutes in 5-d assessment (50-min intervals)

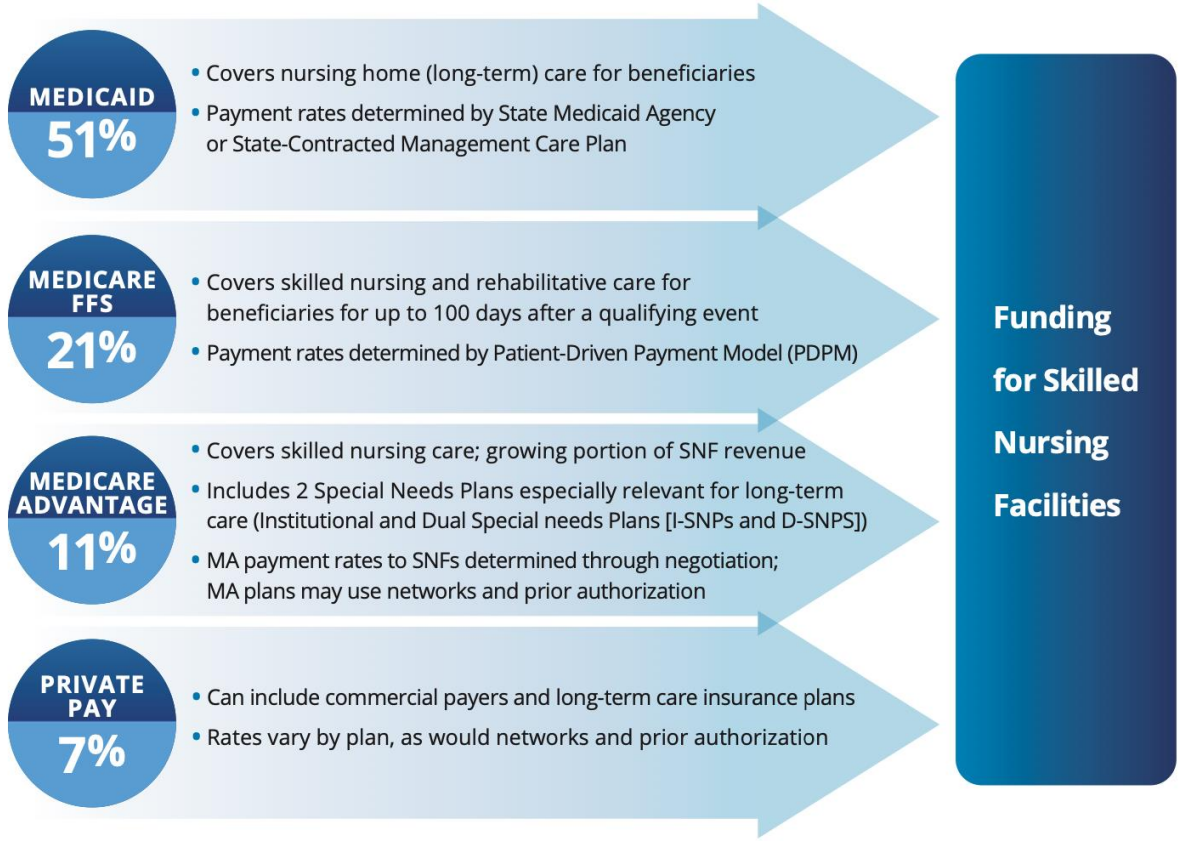
Figure 3. Therapy Use and Health Outcomes Before and After the Patient Driven Payment Model for Patients With a Hip Fracture Diagnosis



Each panel is based on a separate regression discontinuity plot. Each scatter dot represents a 7-day average. The lines are based on fourth-degree polynomials.

Spillovers?

FIGURE 1 **SNF Payment Distribution, Highlighting Reliance on Public Payers.**

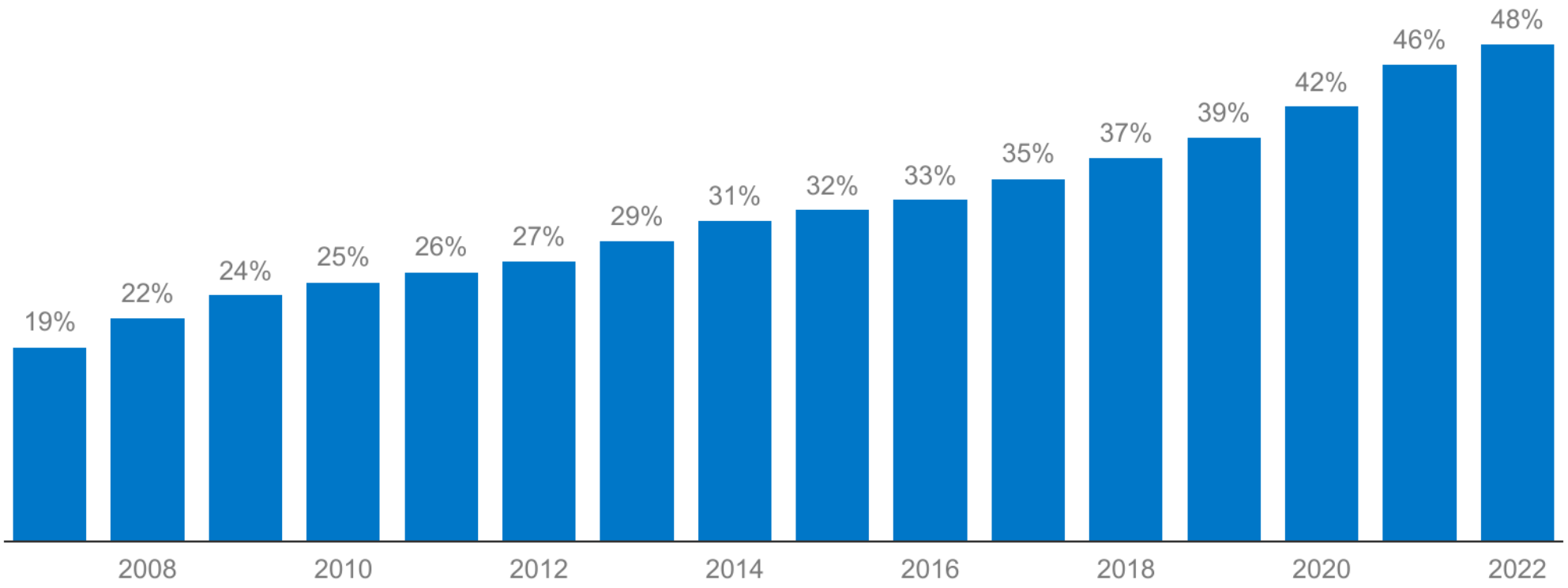


Data Source: 2019 Annual Skilled Nursing Data Report. Key Occupancy and Revenue Trends. NIC MAP Data Service15
Note: Remaining 10% is classified as "other", per the 2019 Annual Skilled Nursing Data Report.

Figure 1

Total Medicare Advantage Enrollment, 2007-2022

Medicare Advantage Penetration | Medicare Advantage Enrollment



NOTE: Includes Medicare Advantage plans: HMOs, PPOs (local and regional), PFFS, and MSAs. About 58.6 million people are enrolled in Medicare Parts A and B in 2022.

SOURCE: KFF analysis of CMS Medicare Advantage Enrollment Files, 2010-2022; Medicare Chronic Conditions (CCW) Data Warehouse from 5 percent of beneficiaries, 2010-2017; CCW data from 20 percent of beneficiaries, 2018-2020; and Medicare Enrollment Dashboard 2021-2022.

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Prior Evidence of Spillovers

- Lots of evidence of "spillovers" from traditional Medicare (TM) policies to Medicare Advantage (MA) patients
  - Mandatory bundles (Wilcock et al., 2020 JAMA Surgery; Einav et al., 2020, Proc Natl Acad Sci USA; Meyers et al., 2019 JAMA Netw Open)
  - Voluntary bundles (Navathe et al., 2021 Ann Intern Med)
  - Hospital Readmission Reduction program (Chen & Grabowski, 2019 MCRR)

Could a Medicare SNF FFS payment policy "spillover" for MA patients?

Research Question

Did the PDPM spillover to MA patients receiving SNF care in terms of therapy minutes and outcomes?

Data & Study Population

For 2017-2020:

- Medicare Beneficiary Summary File (MBSF)
- Minimum Data Set (MDS)

Sample consists of all Medicare beneficiaries ages 65+ admitted to SNF between January 1, 2018 and June 30, 2020

Patients with a previous nursing home stay in year prior to their admission date were excluded

~3.7M patients, 26% were post-PDPM and 33% were MA

Measures

- Main Exposure: SNF admission on or after October 1, 2019, time as a daily variable ranging between -638 and +273 days
- MA Enrollment: Based on month of SNF admission
- Therapy Use: Daily total/individual/non-individual therapy based on scheduled day 5 assessment
- Patient Outcomes:
  - Discharge to hospital within 40 days
  - SNF stay of 40+ days
- Other measures:
  - MBSF: age, race/ethnicity, and sex
  - MDS: ADL score, Cognitive Function Scale, diagnoses/symptoms, Changes in Health, End-stage disease and Symptoms and Signs (CHESS) score.

Analyses

- Regression discontinuity (RD) approach around Oct 1, 2019 (PDPM)
- Separate RD models for TM and MA patients
- Unadjusted and adjusted (age, sex, age, dual eligibility, and indicators for the type of MDS assessment) models
- Estimated the RD effects of PDPM separately for SNFs with different levels of MA concentration

Demographics

	Traditional Medicare		Medicare Advantage	
	Pre-PDPM	Post-PDPM	Pre-PDPM	Post-PDPM
N	1,867,184	623,867	926,343	353,730
Age	81.3	81.2	80.9	80.7
Female	60.3%	59.4%	61.9%	61.2%
Black	9.0%	9.0%	13.0%	13.6%
Hispanic	1.4%	1.3%	2.4%	2.3%
Other race	3.2%	3.3%	3.2%	3.3%

Facility-Coded Health Conditions

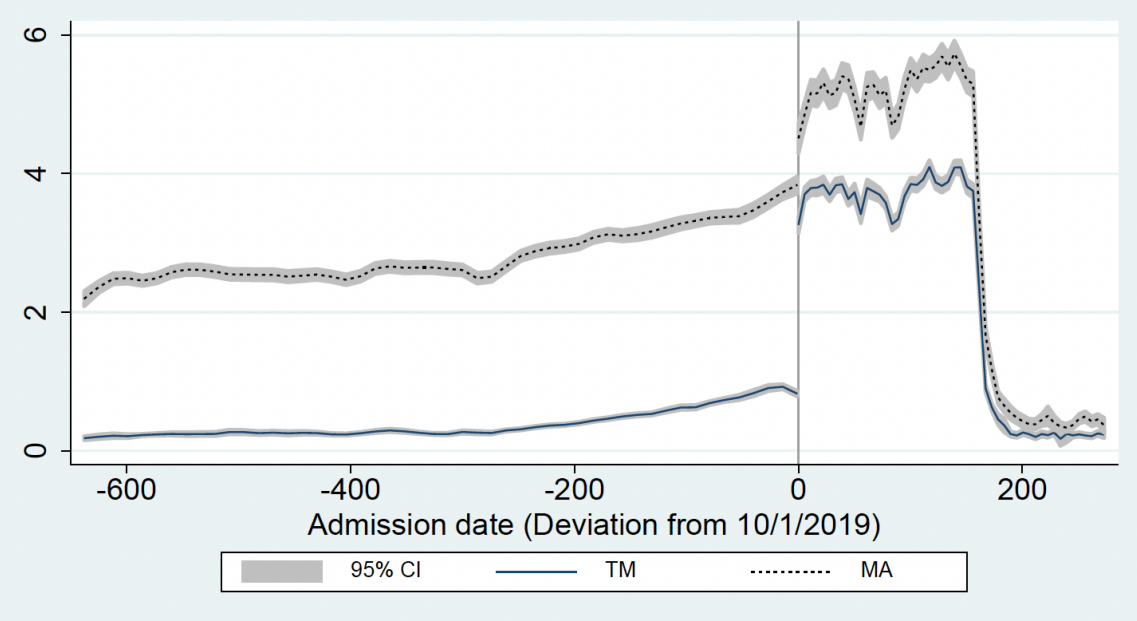
	Traditional Medicare		Medicare Advantage	
	Pre-PDPM	Post-PDPM	Pre-PDPM	Post-PDPM
ADLs at Admission	17.0	17.0	17.3	17.3
CFS = 3 or 4	20.8%	22.4%	20.0%	21.2%
Diabetes	31.6%	33.5%	34.8%	36.8%
Coronary heart failure	22.4%	25.1%	21.9%	24.2%
Stroke	8.1%	12.5%	8.8%	12.6%
Alzheimer's/dementia	22.5%	24.0%	22.3%	23.4%
Schizophrenia	1.6%	1.9%	1.2%	1.4%
Bipolar disorder	1.7%	2.0%	1.6%	1.8%
COPD	23.5%	26.6%	23.3%	25.8%
Multiple sclerosis	0.5%	0.5%	0.4%	0.5%
Aphasia	2.0%	3.0%	1.9%	2.7%
Dyspnea	16.7%	23.7%	15.0%	20.3%
CHESS score	0.62	0.83	0.59	0.75

Outcomes

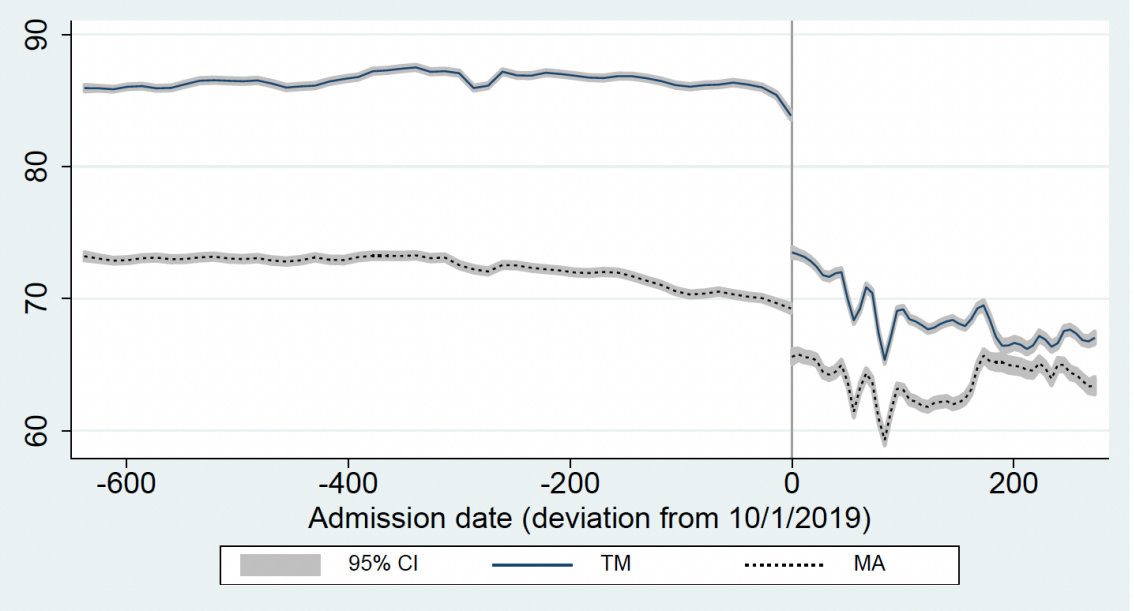
	Traditional Medicare		Medicare Advantage	
	Pre-PDPM	Post-PDPM	Pre-PDPM	Post-PDPM
Total therapy minutes per day	86.6	71.7	74.9	67.4
Individual therapy minutes per day	86.3	68.9	72.1	63.5
Non-individual therapy minutes per day	0.4	2.8	2.8	3.8
Hospitalization within 40 days	25.2%	23.1%	22.5%	20.7%
Length of stay greater than or equal to 40 days	35.8%	36.1%	30.0%	30.3%

Trends in Therapy Use

Panel A: Non-individual minutes per day



Panel B: Individual minutes per day



Trends in Outcomes

Figure 2: Trends in likelihood of hospitalization within 40 days following nursing home admission for Medicare Advantage (MA) and traditional Medicare (TM) enrollees

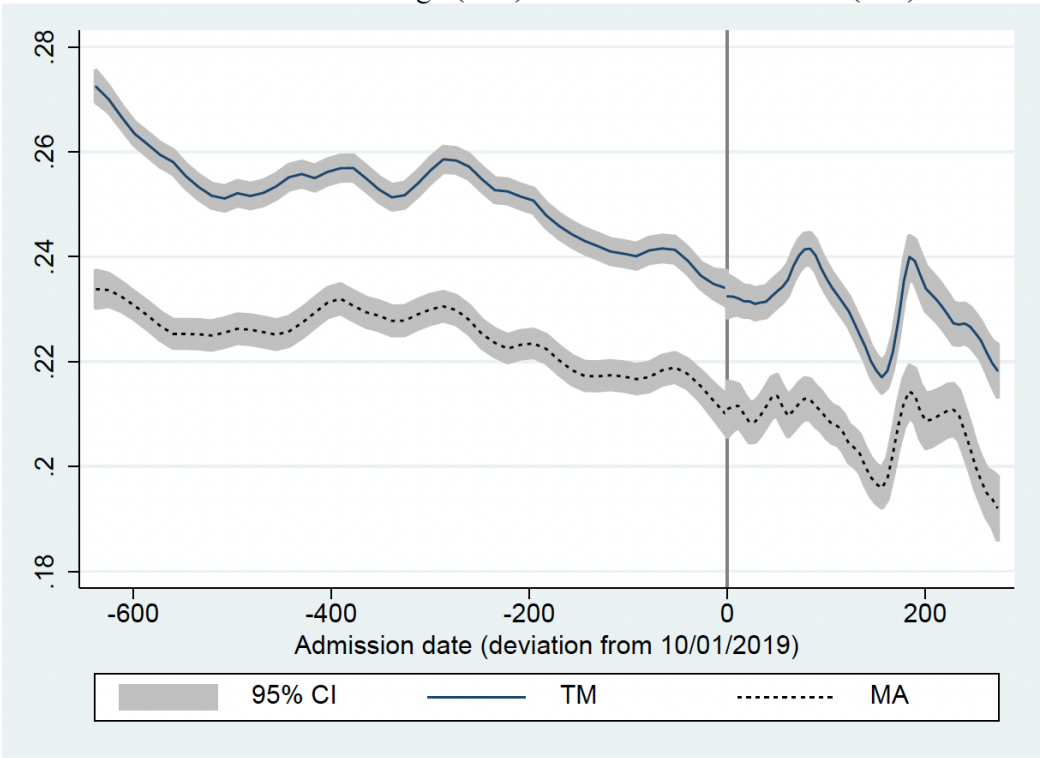
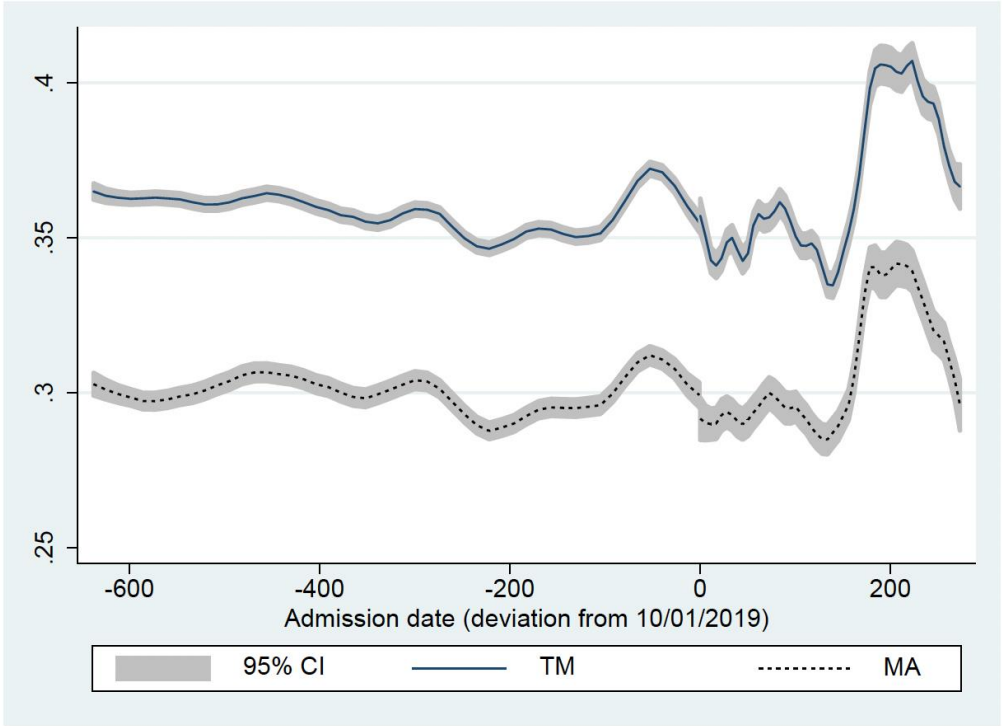


Figure 3: Trends in likelihood of nursing home length of stay greater than or equal to 40 days following nursing home admission for Medicare Advantage (MA) and traditional Medicare (TM) enrollees



RD Estimates

		Therapy minutes per day			40 day hospitalization	SNF length of stay>=40 days
		Total	Individual	Non-Individual		
MA N=1,280,073	Unadjusted	-2.328***	-3.134***	0.805***	0.0059	-0.00374
		[-6.943]	[-9.354]	[7.505]	[1.360]	[-0.769]
	Adjusted	-2.277***	-3.152***	0.876***	0.00772*	-0.00758
		[-7.005]	[-9.689]	[8.221]	[1.851]	[-1.642]
TM N=2,479,113	Unadjusted	-8.049***	-10.61***	2.559***	-0.00061	0.008**
		[-29.66]	[-39.94]	[52.82]	[-0.183]	[2.155]
	Adjusted	-8.501***	-10.98***	2.484***	0.00431	0.00098
		[-35.84]	[-47.09]	[51.77]	[1.344]	[0.275]

RD Estimate of Daily Therapy Minutes by SNF MA Share

	MA penetration <15%	15%≤MA penetration <30%	35%≤MA penetration <45%	MA penetration ≥45%
MA	-3.751***	-2.849***	-1.821***	-1.338**
	[-4.731]	[-4.236]	[-2.717]	[-2.309]
	N=259,441	N=332,920	N=279,104	N=406,756
TM	-8.271***	-7.862***	-7.712***	-8.097***
	[-18.55]	[-15.82]	[-11.34]	[-12.71]
	N=1,010,551	N=697,840	N=373,224	N=397,498

Limitations

- Quality measures somewhat limited due to MDS
  - Longer-term functioning
  - Mortality
  - Burden on family caregivers
- Measure of therapy use focused on day-five assessment
- Measure of hospital readmissions a narrow one

Summary of Results

- Big spillover of PDPM to MA SNF patients in terms of therapy minutes
- No real impact of PDPM on outcomes for TM or MA patients
- Evidence of upcoding of MDS patient characteristics in response to PDPM both in TM and MA patients
- All these results (spillovers; PAC inefficiencies; upcoding) consistent with broader health economics literature

Thank you!

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